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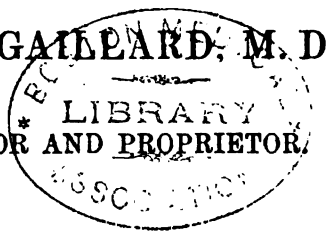

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—WOMAN AS A PHYSICIAN. By J. P. CHESNEY, M. D., New Market, Missouri.

The question as to the propriety of admitting women to the benefits of a medical education, preparatory to entering professional life, through the facilities now offered by our medical colleges and hospitals, necessitating as it does in most instances a "mixed clinic," has opened up the whole question of "woman's place in nature," and has, of late, occupied much attention and elicited much comment and discussion from the medical press, and the various medical organizations, throughout this country and in Europe.

In considering a subject of so wide a range there have, of course, been varied and conflicting views; the querulous and discontented finding ample scope for controversy, while the sober and considerate find presented for their analysis, a theme of important and profound inquiry. A dozen years ago, few among us had a thought that this, among a vast array of others, would be a question presenting itself for our solution. But the last decade has been a period pregnant with events of importance to the human family, and it may prove that the advent of females as physicians, was not the least among

them. At all events, the issue, whether of our seeking or not, stands out in bold relief, and it would be well for all interested to understand that it, like all questions of its class, can only be settled by the calm and unprejudiced reasoning which will examine the matter in all of its phases; giving the proper importance to any merit it may be found to possess, and stern condemnation to its errors.

The question has been viewed by its opposers, from three stand-points: the moral, mental and physical; the most strenuous and plausible objections being made by those who take the ground that the moral status of woman, or the moral status of medicine, rather, forbids their engaging in such pursuits; and, while they certainly bring to their aid much that is logical in argument, I am persuaded that close scrutiny will reveal the fact that their general position on this division of the subject, is entirely untenable. The moral aspect of the matter has really but one side; it is either right or it is wrong, and which it is, is a question not for the medical profession alone to solve, but one that must be tried by the high court of public opinion, a tribunal before whose bar we all have to be judged as to our professional capacities.

I may anticipate, by saying, that I am not of the fanatical school which would have the world believe that woman may properly claim and exercise any or all of the prerogatives of the sterner sex, as if that doctrine should be universally admitted, our scientific, social and political fabric might, ere long, assume a complexity that would confound philosophers, in other fields than medicine.

A position of that kind would necessitate charges of a grave and absurd oversight in the plans of creation, in withholding from them beards and other attributes which constitute distinguishing marks between the sexes, besides giving us an example of a palpable violation of impartial justice, in imposing upon them functions which often prove a source of physical pain, danger and death, while in all things else they should remain on an absolute equality. There is a wise

and broad sense of justice pervading all nature, which leaves little room for us to impeach the arrangements of the Divine Author of the Universe.

On the other hand, I am not one among the other extremists who look upon every departure by woman from the sphere in which we have been accustomed to find them, as an effort on their part to unsex themselves, and while I doubt not that there are many fields of usefulness besides medicine, yet unoccupied by them, to which they might, with equal propriety, direct their energies, that fact does not alter the principle as to the right or impropriety attached to their becoming members of the medical or any of the learned professions. To become doctors is undeniably their abstract right, and their inclinations and qualifications should be immediately recognized as the only legitimate condition to their entry into, and peaceable occupancy of, the field of practical medicine, in any or all of its departments.

This is an era of advanced ideas in regard to most human occupations, and it is possible that we have, until lately been pursuing chimerical ideas in regard to the capability of woman to enter, successfully, the higher pursuits of life; an idea which, perhaps, might properly be classed as a counterpart, and add a third to the "twin relicts of barbarism," of which our political friends used to talk so much. The broadest liberality, and most charitable conduct and sentiment, should actuate our noble profession in dealing with this question. We are, perhaps, the last portion of society, in whom it would be proper to allow narrow views and ill-judged prejudices to usurp the place of reason, and the most exalted magnanimity.

Much as I admire the conservatism, character, and profound learning of Prof. Samuel D. Gross, proud as I am to belong to the same profession with one possessed of so many noble qualities of head and heart, and warmly as I feel toward most of the sentiments expressed by him, during his remarks on this subject, at the recent meeting of the Medical Society of the State of Pennsylvania (*Medical and*

Surgical Reporter, June 25, 1870), I can hardly be persuaded that it was "a prurient and itching curiosity which called them there, nothing else" (having reference to nine young ladies whom he had observed attending a surgical clinic sometime during the winter before), as it might have been in them that exalted and responsible feeling which actuates all true devotees of physic, urging them to sacrifice, on the altar of science and future benevolence, all the grosser feelings of the human soul, and giving them power to rise superior to the groveling propensities, which so often animate the hearts of those engaged in pursuits less related in their nature to the ministrations of the angels. I apprehend that even young men are usually so deeply impressed with the solemnity and responsibility inseparably connected with the associations and work of the practicing physician or surgeon, that in most cases, even during their pupilage, "prurience" is seldom an important element in their cogitations. I am of the opinion, and few will take issue with me upon this particular, I presume, that the same truth will hold good, and to a much greater extent applied to females under like circumstances, as I believe the female sex to be master, or mistress rather, of their sensual appetites, to a far greater extent than are men. I can think of no better test, than to ask every medical gentleman, who has conscientious doubts as to the moral propriety of women assuming the duties of physicians, to apply his objections to himself, in relation to his own feelings, when young, and perambulating the wards of women's hospitals, or to the sentiments which actuate him in his professional dealings with the opposite sex; and I am safe in the assertion, that he will be the better fitted to render an impartial verdict in the case at variance. Can he not be generous enough to allow that pure feelings would animate and inspire to noble efforts, in relieving human sufferings, her heart as well as his? Is she not his equal, if not his superior, in all the moral and Christian attributes? It is an idea extremely paradoxical, to suppose that woman, the fairest and best of God's handiwork, and practical medicine,

a calling little less sacred than the holy ministry itself, should, when united, become a loathsome abomination, a moral pestilence, from which virtue must stand widely aloof.

I am well aware that few men now occupying place in the ranks of legitimate medicine, would remain, were they convinced that the calling had attached to it a contaminating quality. Why should not medicine injure man's morals? Is man better proof against inroads from moral contagion? There are a hundred prostitutes of his sex to one of theirs—custom of his own making, allowing him a little more latitude in gratifying his sensuality—not a difference in the principle. The old philosophy, that it is a poor rule that will not work both ways, is as applicable in this case as in any other. After all that may be said in regard to the matter, I conceive that there is no great difference between the moral stability of the sexes, circumstances being equal. It needs no strain of imagination, to suppose that women, who will bear with unfaltering stoicism, the scoffs and unmanly insolence of the thronged lecture-room (the "tax of impudence, a strumpet's boldness, a divulged shame," and are "traduced by odious ballads" and "names sacred otherwise," are insulted by "obscure caricatures being thrust upon their lap," all for the sake of science, and the hope to be of future usefulness), are of no ordinary type of brain and nerve, and are likely to perform with credit to themselves, and benefit to their clients, any duties they may undertake.

If the same logic now advanced by the opponents of lady doctors, had been adopted a few centuries ago by the profession, and the public, in regard to the propriety of the sexes "mixing" in a professional capacity, men would long ago have been scouted from the field of obstetric and gynæcological medicine, and the important scientific and humane results, which have rewarded the labors of those conducting these inquiries, might never have been realized; and an important field of the present physician's and surgeon's most successful and useful practice, would yet have been in the keeping of the ignorant and brutal midwife.

Had that absurd notion outlived its opposition, hundreds and thousands of the world's female population who now live in health to testify to its folly, would still have been "doomed to tread with weary step life's barren waste, where no beautiful oases — green with verdure or blooming with flowers — had adorned the deserts of their lives; where no evergreen glades or shady bowers, with notes of prattle upon the balmy breeze, had rested their weary forms or cheered their aching breasts; where no silvery rills, nor pebbled brooks, nor purling streams had danced in the sunset's mellow gleams, to cheer them on their lonely way. To them the charms and endearments of domestic bliss, and the fond imaginings of a mother's endearing love had never, never come, only in fleeting and ever changing visions, that vanish on the waking of the dawn." (Battson.)

Those who imagine that women are of little moment in the conduct of the world's advancement, should remember that they have in all periods of the world's history, been first to stanch the tottering fabrics of morality and religion; and that to-day their hands are the first to drag from the depths of degradation and ruin, the helpless inebriate, and the fallen of their own sex; they are the first to brave the dangers of the storm-tossed ocean, the scorching sands of the desert, the pathless wilderness—leaving behind them the comforts and endearments of home and civilization, they throng to their self-immolation, that the benighted denizens of the earth's remotest verge, may find eternal life. In the camp, in the hospital, on the gory battle-field, they hold the cup to the parched lips, soothe the aching brow, and with their tender presence, yield the sunlight which raises thousands from the couch of despair, or smooths the rugged pathway for those who had before known no hope. In a word, their usefulness in the hour of suffering, danger and dying, is unsurpassed—unequaled by their male companions, notwithstanding their claims to a greater share.

I am aware that we can find few precedents in the annals of ancient medicine, upon which to base a spacious defense

of women's entering the pursuit of physic; but as this moral bugbear seems to loom up in gigantic proportions on all occasions, when the question is talked of or written upon, it is well to stop and institute an inquiry as to whether there has ever been anything observed in the conduct of female aspirants to the honors of the M. D., to warrant the conclusion that the "hobby" has its foundation in fact. The world has never, so far as I am informed, accused Florence Nightingale of lewdness, nor has an "itching curiosity" been the governing incentive in the professional career of Elizabeth Blackwell, and Miss Garrett. Nor have I seen an authenticated instance in which a female medical student has been charged with "prurient" or unbecoming conduct. If anything of the kind had occurred, the lynx-eyed populace, who are ever on the alert for items of scandal, would not long have kept the world from the benefits (?) of the important secret.

It would seem that the war on the "innocents," on the score of moral grounds alone, has nothing for its foundation more substantial than the "baseless fabric of a vision." Let gentlemen be perverse as they may, it is evident that "female physicians" are to become a recognized feature in our professional household: they number among their supporters many of the first medical men in Europe, and this country. Among the familiar names in Great Britain may be mentioned Sir James Y. Simpson (lately deceased), Robert Barnes, J. Hughes Bennett, Lionel S. Beale, Wm. B. Carpenter, Thomas King Chambers, Curling, Erichsen, Murchison, Sieveking, etc., and others whose names I can not now remember. On the other hand, it numbers among its avowed enemies many names of eminence and authority, not the least among them Prof. Gross, of Philadelphia.

The prediction of a recent foreign writer upon this subject is that "women will soon take a high place among medical practitioners in this country (England); nothing would tend more toward human progress, the diminution of human suffering, and the prevention of disease, than the admission

of females to all branches of the healing art." When our College and Hospital authorities recognize the justice of the sentiment expressed in the foregoing extract, and so far divest themselves of preconceived and, to my mind, erroneous ideas in regard to this matter, as to admit on terms of equality to their lectures and clinics, students of either sex, who may present themselves with proper credentials, the contention would be hushed into quiet: then, and not till then.

In adding to this part of the subject, I can do little better than improve Hamlet a little—a thing which my readers will no doubt say would be no small task for an older and wiser head than mine. He asks, "What a piece of work is a man?"—What a piece of work is Woman! How noble in reason! how infinite in faculties! in form, and moving, how express and admirable! in action, how like an Angel! in apprehension, how like a God! the beauty of the world! the paragon of creation! "All this and more" might well be said in her behalf, though "this goodly right, the earth, seems not to me a sterile promontory," nor "the o'erhanging firmament a foul and pestilential congregation of vapors."

In considering woman's capacities to occupy successfully a place in practical medicine, the second stand-point, that of mental adaptability, is reached. It is a singular fact that this, the most essential prerequisite to her worth as regards her relation to the sick, in the capacity of physician, has been almost entirely ignored as a debatable point; and the one of infinitely the least importance—morality, allowed to monopolize the discussion.

Even amid the great clamor raised throughout this country, and in most countries of Europe, for more efficient intellects to begin with, more thorough preparatory training, and a higher standard of requirements generally, for male students, before admitting them to the honors of the Doctorate, the female portion of the medical world have almost totally escaped attack, in the most vulnerable quarter; and is thus left, to enjoy the delusive supposition that they are perfect as to mental material.

Physiology and anatomy teach us, that there is a very wide dissimilarity in the arrangement and functions of the physical organization of the two sexes; but that in the mental organization there is very slight difference to be observed.

In the female, the osseous, the muscular, the vascular, and (least of all) the nervous systems, are unlike those of the male; and even the composition of the blood is different. When, however, we come to compare the important function, the intellect, the marked difference before observed everywhere to exist, here, in a great measure, disappears; leaving the two sexes nearer on an equality in this than in any other characteristic. There is in this particular certainly a difference observed, and it is in favor of the male: the cerebral hemispheres in the female being inferior in size; while there is little or no observable discrepancy in other portions of the encephalon; the superior development of brain substance in the male, however, only corresponding to his superior physical development.

While candor compels the admission that her powers of logic and analysis may not be so profound as those of the sterner sex, her intuitive powers are certainly greater than his; her perceptions more acute, and her apprehensions quicker; often enabling her to scan the human character, read the feelings of others, and probe the hidden mysteries of the human heart, when man's most searching investigation would be completely inefficient. This principle in the female mind, is equivalent to that trait in the minds of mankind in general, which allows that first impressions of any given occurrence, founded upon a reasonable relation of the facts attending it, are, commonly, more nearly correct than those formed after deliberation, this faculty bearing a close correspondence to that of instinct.

The characteristics of the female mind, above set forth, could in no pursuit be of more ready application, and of more value, than in practical medicine; as while a profound knowledge of the principles of the science is often essential in arriving at correct ideas in pathological problems; yet in

many diseased conditions, particularly among the susceptible and nervous of her own sex, among whom her practice would mainly be confined, their nature can only be made apparent by exploring the hidden recesses of the soul—the whole human fabric, moral, psychical and physical. Her powers of interpreting the feelings of others, her ready sympathy with the afflicted and unfortunate, and the strength of her intuition, guiding to clearness and decision in judgment and action, can but render her an efficient aid in the sick household.

While we are not inclined to debate the proposition that women are equal, in point of intellect, with men, we have the premises clearly before us upon which a very material part of this inferiority depends, namely, the lack of opportunity; particularly is this the case with our Western females, who have had the advantages of education very sparingly meted out to them.* With all our modern civilization and Christian progress, our women have been, and are yet, too generally looked upon through the shadow of the long intellectual night, which for so many weary centuries preceded the waking of the dawn, two hundred years ago; and which yet occasionally flits across the splendor of our intellectual noonday. While woman has not the same facilities afforded her in our institutions of learning, whereby she may receive primary and complete training, equal to that bestowed upon the male sex, we may not expect to find her equal in intellectual development.

However this matter of female education may have been lacking in the past, the noble generosity of such men as Vassar, and the wise liberality evinced by our people generally, in our own generation, in this direction, have been and will yet be, the means of perfecting, as nearly as can be, our already advanced civilization. Indeed, our females have themselves awakened from the long night-slumber which enveloped them, and are making Herculean efforts toward equality in the affairs of life; efforts which promise to be crowned with a greater degree of success, and to be

fraught with more important results than the most far-seeing could have anticipated, a quarter of a century ago.

We now find them in the school, the college, the hospital, the hustings; on the bench, at the bar, in the office, behind the counter—everywhere! And their ingenuity, integrity, perseverance and economy, have given them a place in most of these positions, hardly excelled by the most accomplished of their male compeers.

The only place from which woman has been sternly driven, the one in which the enlightened Christian age, in which we live, would have expected first to have found her, is the pulpit; it has been proof against all her endeavors to enter its holy precincts; and she has to confine her Christian ministrations to the outskirts of the religious domain. This, I can not help regarding, as another evidence that we are not yet entirely freed from the influences of superstitious and bigoted intolerance. It is claimed that it is against the teachings of the Scriptures to permit women to publicly proclaim the teachings of the Bible; and that a violation of the doctrine thus taught, would expose the perpetrator to the wrath to come. Woman's mission on earth, is peace and love, and her chiefest "glory is going about doing good." It would be difficult, indeed, to find fields more fitted for her ministrations, than the souls and bodies of men.

Although the disparity between the intellectual endowments of the two sexes, has been spoken of in a preceding portion of this paper, it must not be inferred from what is there said, that the difference is acknowledged to be great; or that women are not adequate to the attainment of the most exalted positions intellectually. That they are, and ever have been, found in many of those stations in life, which are the reward of intellectual worth, is attested by the records of the past and the present. Examples are not wanting, in which woman has attained eminence in the arts, sciences, literature and politics; sculpture, music, the drama; astronomy, botany and medicine; poetry, fiction and history; diplomacy, government, and even war itself, have

acknowledged themselves debtors to the powers of her mind; and to her participation in the affairs of life in the future, must we look to be kept from retrograding into barbarism, and falling again into that abyss of degradation, from which the human family have so lately emerged. It must be remembered, that a just recognition by man, of woman's equality in all things socially, was the first step toward permanent civilization; and now the acknowledgment of her equality, mentally (and, perhaps, politically), remains to place the progression of mankind on a sure and lasting foundation.

I do not wish to be held responsible for the sentiment, which would admit the female world, indiscriminately, to the ranks of medicine; the same requirements as to mental capacity, preparatory education, and moral character should be required from them, as is exacted of male students when applying for matriculation. Indeed, the requirements in these particulars should be enforced with the most rigid exactness, in their application to both sexes. It is a fact everywhere recognized, that the most notorious and dissolute can gain access to our medical colleges, placing thus a lasting stigma upon the colleges, and an unjust reproach upon the profession. I hope never to be under the disagreeable necessity of recording the same against women's medical colleges and female students.

Women have always exerted a potent influence in the sick chamber, and not always for good, as I have no doubt most of my professional brethren can bear testimony. By having an educated class among them, to warn them of the dangers of intermeddling, the evils springing from this class of self-constituted doctresses might be very materially lessened. The power exerted by woman over the minds of the sick and their friends, in regard to the doctor to be employed, the remedies to be used, and indeed the whole conduct of the sick room, is truly wonderful, as every candid reader will admit; and this wonderful sway obtains over all alike—the rich and the poor, the intelligent and the ignorant—and, to my mind, constitutes a very powerful argu-

ment toward allowing her a thorough medical training, and fitting her to use this immense power in a wise, legitimate, and scientific way. Half the value of practical medicine originates from enforcing hygienic regulations and thorough control in nursing.

It would be superfluous to extend this article by a lengthy comparison of the physical powers of the sexes, the delicate bone and muscle of woman being indisputably outstripped by the brawny sinews of her rude companion. This, however, only holds good as a general rule, for it is equally certain that there are occasions where woman's physical superiority is so manifest that it leaves no room for argument; and these occasions are at the bedside of the sick. As a nurse her physical capacities are incomparably superior to those of man; thus presenting for her a claim to the ranks of medicine that can not be ignored when her claims are honestly considered. Who ever heard of a woman succumbing to the toils and exhausting vigils incident to nursing those in whom she was interested? It is the mother, the wife, the sister or daughter, whose eye is never closed, whose ear is never deaf, whose feet are never weary, while the necessities of the sick have a claim upon her. The morning's dews, or the gloom of midnight, deter her not from her humane ministrations; no one like her can smooth the painful couch, make sweet the bitter draught, or calm the aching heart; no one so ready to gratify the childish caprices or soothe the distempered imagination when "thick coming fancies" oppress the troubled brain. In fact, it would appear that there is a strange compatibility between women and the chamber of the sick; their benevolence relieving it of many of its terrors, while in its solemn precincts they learn, and teach, those lessons of humility and self-sacrifice which we are assured constitute half the wages of a blessed immortality.

When pestilence, in its most dreadful aspect, spreads dismay and death among its crouching victims; when famine's gaunt form fills the land with mourning; when grim-vis-

aged war gives the wail of the widow and fatherless to the pitiless winds, woman is the last to desert the post of danger, and often goes down amid the wreck that surrounds her. To brave these dangers, often more terrible than the cannon's mouth, requires an amount of physical endurance, mental and moral fortitude, possessed in a surpassing degree by but few men, if we except physicians. In trying epochs, like the present war in Europe, and during our civil war, when the larger portion of the male population (physicians especially) is taken from some districts, how inconceivably valuable might a medical knowledge in a portion of the females become?

It may, without detriment to the argument as to the mental and physical fitness of women to become doctors, be admitted that, while there are some departments of medicine more particularly adapted to their capacities and tastes, and in which they have proved themselves the equals of the most superior male practitioners—the field of obstetric medicine and surgery, for instance—there are some others, surgery in particular, in which they may not hope to become as efficient as men; though this can not, by any means, serve as an argument to keep women from the profession of medicine, as the same rule applied to men (a vast majority of whom have no capabilities as surgeons), would give our professional ranks an undesirable tenuity. Any rule which will hold good for men as a class, in the social affairs of life, will also hold good commonly with women.

It might be objected that the physical inferiority of woman would exclude her from participating in some fields of practice—the remote and sparsely peopled rural districts of our own and other countries, where practical medicine is made a business; and this is true to a certain extent, but not on a scale sufficient to alter the matter to any great degree, as the cities and thickly populated districts offer the widest field of usefulness and pecuniary success to all aspiring professional persons. We may expect that a woman now entering the medical profession will look high, and not

be content with an inferior place, either as to locality or acquirements.

In my effort to arrange my random thoughts on this subject, I have endeavored to report woman and her cause aright to the unsatisfied. If I have not succeeded to the satisfaction of my professional friends, it will be remembered that "the will is infinite, and the execution confined; the desire boundless, and the act a slave to limit."

NOTE.—While the general and special views advocated in this paper are in no respect regarded as safe, judicious, or tenable, and while the course of this Journal has been to support and enforce opinions diametrically opposite, the paper is yet cheerfully published; for no periodical of such a character should be partisan or exclusive in its management; its pages should be open for the fair discussion of all questions. Above all, none as soon as woman should have the right to the fullest consideration of her aspirations, and the most entire protection of her claims. It is believed, however, that she is best protected when protected from those of her sex who seem to have forgotten her most essential attributes, and her most welcome characteristics. Others think differently. She should have, and shall have, entire justice. Her claims are, therefore, here presented.—E. S. G.

ART. II.—THE SIAMESE TWINS. An address delivered before the Medical Society of Berlin. By R. VIRCHOW. Translated by S. BRANDEIS, M. D., Louisville, Ky.

GENTLEMEN:—You have desired me to make a few remarks concerning the Siamese Twins, Chang and Eng. I have, therefore, endeavored to collect the material concerning their case as well as I was able; and I will try to dwell upon the different points which are necessary to explain this very remarkable phenomenon.

The variety of duplicature presented by these twins appears, if we may trust the somewhat uncertain statistical proof offered us, to be the most frequent form seen. In examining the oldest collections of historical monstrosities, as far back

as the 16th century, we already find the adhesions of the breast and of that part above the umbilicus predominating over the great expanse of the breast, neck, and head. In the yet recent collection of the Pathological Institute, there are, among the duplicatures which we have preserved, six cases of union of the thorax compared with two instances of union of other parts of the body.

In accordance with this, there have been, for some time past, a great number of observations made of this form of monstrosity, in which a longer or shorter time of extra-uterine life has taken place; often but of a few hours, in other instances, however, of days, months, and even years in duration. However, there is not a single instance recorded, in which so long a period of life has been observed, as the Siamese have passed through, with but slight disturbance of their general health. For as the twins were born in May, 1811, they must soon reach their sixtieth birthday.

The first question which has always arisen in the examination of such cases, was always this: How are these double monstrosities produced?—and there always has been this answer given in those extended observations which have been handed down to us—through fusion—an answer which, in reference to the Siamese, has also been given by very reputable embryologists. I will only remark that, when they exhibited themselves in Paris, in the year 1835, Coste, the celebrated embryologist, also expressed himself in favor of this opinion.

In the older descriptions quite a number of special instances are given, which should go to prove, that through friction or contusion of two embryos such fusions have occurred. The celebrated Sebastian Munster reports at some length, how a mother, in a certain period of pregnancy, by striking against another person suffered a shock, and he is convinced that this was the cause of the subsequent miscarriage of a deformed fœtus.

I have for some time past adopted the contrary opinion, and although I often enough have been in a position to ex-

amine this question, I am still, even when considering the Siamese, not in any way doubtful that double deformities are not produced by fusion, but by segmentation. True, when one sees two such individuals, with perfect development of all parts, who are only united at one point, it is possible to think that a subsequent fusion of embryos, which are otherwise fully developed, might be possible; nevertheless, there are very important obstacles to oppose the adoption of this theory, and from the fact that with an otherwise faultless development of the individuals, but slight deformities are present, I think the adherents of the fusion theory, if they reason on it, would doubt the truth of their doctrine. It is quite clear, that fusion of two embryos, one with another, is only possible when they are not separated by their various coverings. With the theory of fusion, we must then take for granted, that in consequence of those mechanical changes which brought the two bodies into contact, the enveloping folds were destroyed, the bodies came into actual contact and then fused, an assertion which is, however, very doubtful. On the other hand, I must draw attention to the fact, that in all cases in which fusion was discovered on the surface of children otherwise perfectly developed (and there is not a small number of cases in which the pelvis or the head of a fœtus was fused to a portion of the amnion), in every instance there were uniformly great deformities presented in the child, under consideration; deformities which are produced during the intra-uterine life of the single fœtus, may always be traced back to some inflammatory process. These fœtal inflammations extend themselves more irregularly than those during extra-uterine life. We, therefore, find at the birth of such a child, the region affected over a more extended area than is the case in individuals after birth. A simple adhesion between the head and the ovarian membranes, of not greater area and seriousness than most people have not only once but several times in their lungs, suffices to produce a hydrocephalic, and perhaps an ancephalic in-

fant. These serious results are also produced by the inflammatory process in other parts of the fœtal body.

But no one has ever discovered anything in double monstrosities which would point out the existence of such fœtal inflammations. While not in other instances, (where union of the surface of the body with adjacent parts has occurred, could with certainty demonstrate the results of the inflammatory action,) still at present every trace of any tissue is wanting in cases of double deformity, that we might consider as the result of any inflammatory action. We would have to go back to an exceedingly early period of fœtal life; we would have to take for granted that in the very beginning two ova had lain so closely together that their first development had brought them in contact and produced a union between them. In this case it would be very remarkable that two eggs of this sort should in other respects go through their normal development without any disturbance, and that they should fuse at that very point, where the development of external and adjacent parts would tend to separate them from each other.

This theory of fusion must contend, however, with still greater difficulties, as it is often asked, Whence do these two ova come? One is then always referred to a single ovarian follicle. When one has the opportunity to examine the ovary of a mother of twins—one finds in the case of twins of the same sex but a single ruptured sac—always, but one large *corpus luteum*, and it is easily inferred that both individuals are formed from a single ovum.

When we consider, that in every well authenticated case of adherent or united twins both children without exception were of the same sex, that, one doubtful case excepted, it has never been observed that a male and female child were grown together, that rather *homologous, or two male or two female* children were attached; that the physical development was always in direct proportion to the mental, and when internal or external differences appeared, these first showed themselves during the progress of life, and are explained by

different disturbances; when we then see, that in the majority of cases there is to all appearances the greatest similarity, we will then, with right, be able to assert, that the law which is now generally accepted, also holds good in the case of these twins, namely, that they were produced, *not by the fusion of two ova*, but by the segmentation (division) of a single one.

I will add another observation, which, I think, determines this opinion. We have direct observations in the case of fish and lower animals, *i. e.*, those by *Gegenbaur* (Wurzberg Transactions, Vol. II., page 166), on the snail, in regard to the division of a single egg and the development of a double animal from *one* egg. This was directly observed in the egg. It is not a theory, but a proven fact. No one has seen, on the other hand, two eggs fused and double monstrosities formed out of them. The case of segmentation was then observed. The case of fusion is but an hypothesis, and, plausible as this theory may be at a first glance, you will still, when you investigate it more closely, decide in favor of the segmentation theory as being the more probable.

We have, unfortunately, no series of observations in regard to the behavior of the ovarian membranes in such cases; however, the observations arrived at agree in so much, that but *one* placenta—a simple chorion—one amnion—and never a plurality of these was present. These conditions would be difficult of explanation if we were to consider the value of the theory of originally separate ova, while easily explained if a single ovum were present, which only after partial development gives rise to two infants.

The theory of segmentation is also acceptable, as from this stand-point duplicities in every instance may be explained, a double finger, as well as a double individual. No one will, if any person has a sixth finger, think that this duplication was produced by the fusion of two buds, while the production of this monstrosity by division is very plausible. This simplicity, this searching application, is, as it

seems to me, a very decided advantage of the theory which I advocate, in contra-distinction to the theory of fusion.

It is to be regretted that we possess, in respect to the majority of the cases of duplication, but a meagre report as concerns their family record. I have taken pains to collect the suitable material, but nevertheless, I have in but one of the cases, which in other respects is of great interest, in that of Boehm, found the statement, that in the family of the mother two cases of simple twins had occurred before the united twins were born.

Chang and Eng, whose youth is described in a pamphlet published by their direction, deny that twins had ever been born in any branches of their family. They had, it is true, very fruitful parents, who were blessed by nine children, among whom the twins count as two; four before them and three after, but among these there were no more twins. They themselves have succeeded, during a wedded life with two sisters, the daughters of an American divine, to procreate eighteen children; but when I asked them if they had not also twins, they were greatly frightened, and said that it had already gone better than they ever expected.

However, it would be very interesting, and I would direct the attention of all *confrères*, who, in the course of their practice may have had opportunity to make observations on double deformities, to determine by means of the family history, whether twins had ever occurred previously, as it would be an argument in favor of the theory as offered by me, if it could be proven that these duplications could be compared to the common instances of twin births.

In respect to the antecedents of Chang and Eng, I will add that they are descended from Chinese parents who had emigrated to Siam, and that their birthplace was the city of Macklong, which is situated about sixty miles from the capital, Bangkock. The twins describe their first appearance upon the world's stage, as a rather pitiable one. Their delivery was easily secured, because they were very small. In their early life they suffered but little from illness; only

during their sixth or seventh year were they afflicted by variola; and, soon after, by the measles, by which diseases they were simultaneously attacked. In the year 1833, while in Ohio, they suffered severely from an attack of intermittent fever, during which they were simultaneously affected by attacks of chills. In 1819, a severe epidemic of Asiatic cholera visited Siam, during which a part of their family died. Their father died also, so that in their eighth year they had but their mother to support them, in very indigent circumstances. They soon endeavored to earn their own livelihood by manual labor. They began by making cocoa-nut oil; later, they began peddling, the artificial breeding of ducks, fishing, etc. By means of these efforts, which prospered, they lived considerably on the ocean. According to their statement, they soon perfected themselves in rowing, which I easily believed, as they were enabled to row as one man, and thereby employed considerable force. As they were never sea-sick, their predilection for seafaring is explained, and this has never left them. They also learned to swim, and, as they say, acquired considerable proficiency in this.

In 1829, they were persuaded by a sea-captain to go to America, and later, on to England. The captain led them from place to place, and pocketed their money. Only when they acquired full freedom, did they by journeys through the United States, England, France and Holland, gain sufficient means to enable them to marry and found an establishment. During the late war they lost their entire fortune, and were then necessitated to make a new journey to Europe. Hence, we see them, for the first time, in Germany.

The second question which presents itself, and which was erroneously stated in England, that this is their motive for coming here, is, *Is such a case fitted for operation?*

As far as this is concerned, I must next state that we have, in the literature on the subject, two well authenticated cases in which an operation was followed by success. However, both of these cases were very young, and, as is remark-

able, both were of the female sex. The first was observed in the village of Huttingen, on the Rhine, near Basel, by a physician, named Kœnig. The description will be found in the *Transactions of the German Academy of Natural History*, for the year 1689. (Miscellanea curiosa, s. ephem. med. phys. German acad. imp. Leop. nat. cur., Dec. II and VIII, Novem., 1690, p. 309.) In connection with it is a plate, which is of interest inasmuch as it portrays the amnion according to the observations made in this case. Kœnig gives another plate, illustrating the appearance of the children at birth, and still another, giving their appearance after the operation. We learn from them that there was a tolerably large surface, subject to the operative procedure, and that from the external umbilical cord and umbilicus, independent umbilical vessels made their exit, so that, on the whole there was a normal apportionment of vessels presented. The particulars of the description of the body do not entirely harmonize with those facts of which we are now fully cognizant. Fœrster (The Deformities of Man, Jena, 1861), also quotes the observations of Kœnig and Fatiger; while we do not find the latter word in the original report. The operation was performed in this manner: a ligature was applied, and this was drawn tighter and tighter daily, and at last the connection was severed by means of the knife. The later history of the children is not recorded.

We have a case of the most recent date, 1858, quoted by Boehm, in Guenzenhausen, which is recorded in the thirtieth volume of my *Archive*, page 152, the same case, which I have already referred to, where already, previous to this, there had been two births of twins in the family. It was the wife of this physician who, at her third confinement, was delivered of these monsters. Boehm determined to perform the operation immediately after their birth. There must have been a very considerable solution of continuity, for the wound which was produced by the separation measured 5.5 centimeters in diameter. The knife first struck the

cartilaginous connection, then the umbilical vessels, and at that, two arteries and one vein on each side, but not, as an English report (*Medical Times and Gazette*, Feb., 1869, page 171) states, six arteries and one vein. There were also one chorion and one amnion present, and also but a single placental cord. One of the children, which was very weak, died after the lapse of three and one-half days. On the other the wound healed rapidly, and when Boehm, five years later, published his report, he stated that the child was growing rapidly.

These are the only cases on record in which an operation was followed by success. They are valuable in reference to the case under discussion, as in them the circumstances were hardly more favorable than in the Siamese.

It is evident, however, that every attempt of this sort is attended with great risk, because there is no uniformity in the relations of the united parts. From the simplest kind of union, which is limited to a very small surface, we have all varieties, up to the most complicated and extensive, and as the fusion from the navel to the skull occurs more or less often, we also find a greater or less union of organs, and not only of the external, but also of the internal viscera.

The earliest anatomical examination of such a case was made by a physician of Giessen, named Mich. Bernhard Valentine. In his description of two *Monstra Hassiaca* *, we find the very striking anatomical condition (Ephemerid Dec. II., Arm. III., Nov. 1685, p. 191) accompanied by a good plate illustrating the appearance of a pair of male twin monsters, who expired immediately after birth. The union extended from the umbilicus to the xiphoid cartilage of the sternum. There was found a single liver, having two gall-bladders, and two umbilical veins; also a double stomach

* The monster of Giessen is said to have been united in a heterologous manner, there being a boy and a girl, and in such a way that the feet of the girl touched the head of the boy, and *vice versa*. The witness to this was the pastor of the place (not very reliable).

and double spleen, with a normal duodenum and jejunum, which, at its extremity, was dilated into a large sac, from which a double colon made its appearance. All the remaining parts were double.

This condition repeats itself in the majority of similar cases. It is desirable to examine the plate given by Vrolik (The Offspring of Man and Mammalians, Leipzig, 1854, pl. 98, fig. 4–6), which is of special interest to us, because the variety of union at the xiphoid cartilage is similar in many particulars to that of the Siamese twins. This plate illustrates in the best manner that variety of union to which Geoffrey St. Hilaire has given the name of xiphopagie. In the case quoted by Vrolik, the sterna are doubled throughout their whole extent, and only the ensiform cartilages push against each other, but at the end one makes a curve toward the right, and the other toward the left, which appears to be prolongation of the meeting parts.

The deviations are not as great in the Siamese as in the case just mentioned, but we find also in them a protuberance on one side, which, if they are in their usual position, lies anteriorly. Behind we have an undoubted articulation, as in Vrolik's case. The celebrated surgeon Warren (*American Journal of Science and Arts*, Silliman's ed., 1830, vol. 17, p. 202), already described this articulation in the Siamese, forty years ago. To-day, as then, we see, when the Siamese turn around, on the posterior border of the sternal bridge, where the skin lies close to the bone, the joint open and close itself, according to whether the tension is great or small.

In the majority of cases we find, beneath the sternal union, internal connections, and at that usually, as Valentin already stated, those of the liver and duodenum. If the parts are united higher up, the heart will also be implicated. A short time ago I received from district physician Schauenburg, from Quedlinburg, a case of xiphophacic miscarriage, in which a single umbilical vein entered the liver, which, however, was connected behind with a second liver. The

duodenum was surrounded by both livers. The hearts, although otherwise normal, were united throughout. The right child was minus the left lung, and the left minus the right. In other cases the fusion of the hearts is more marked.

In such a great diversity of circumstances it would be wrong to operate unless absolutey necessitated, and every one will agree to the suggestion but lately offered by Simpson, to abstain as long as possible from any operation. We can conveniently imagine a very critical case, say, that one of the individuals dies—a possibility which has already been the subject of discussion. The older authors report such cases of different varieties of double formation, but the majority of these are rather mythical. *Fortunatus Licetus* (*De Monstris Ex. rec. Blassi Amstil*, 1665, p. 75), relates that, during the reign of Henry III, in the year 1044, there was a case of double malformation, female, which was single below the umbilicus; one of the upper halves died, while the other lived for three years more.

The question of operation can only be discussed when we determine positively the nature of the connection between the Siamese, which is accompanied with great difficulties. I can say the following concerning this: The union extends over the whole umbilical region to above the heart's surface. But this region is small compared to that found in normally developed adults. In the strong bridge of the thickness of an arm we can feel from above the xiphoid processes immediately beneath the integuments; in the posterior aspect we find the joint already spoken of, in front a decided process, which leads one to think that the entire ensiform cartilage extends to here; on these points strong muscles are inserted both anteriorly and posteriorly, which accommodate themselves to the movements of the body. They are, undoubtedly, the recti muscles. We see in every movement how they contract and form flat surfaces which occupy the greater part of the surface of the connecting bridge. In the middle these movements are wanting, and here we only find

fibrous tissue. On the lower surface of the bridge, and in the center between the two bodies we find the simple umbilicus; from this we can trace on both sides several coarse cords, which apparently correspond to the former umbilical vessels, and which are seen above as well as below, so that we can say with considerable certainty, that there were, also, double umbilical veins at birth. I put considerable importance to this fact, because the duplicity of the veins increases the probability that the livers do not connect as they generally do when we have only a single umbilical vein. It is true that this has its exceptions, as already stated by Valentin, but I think it worthy of note. The duplicity of veins is a favorable indication for operation.

Neither does percussion give us an explanation of the circumstances presented. The pectoral regions of the two brothers are developed very irregularly, probably owing to the mechanical pressure exerted on the parts for so many years past, for they are accustomed to occupy the same relative position, to lean on each other equally, and those parts which they place in contact with each other are very poorly developed. This habit also explains the fact, that though they can turn around rapidly, this position is always irksome to them, so that they beg to be allowed to turn back to their old position again. The flatness of the chest, and the mal-position of those parts lying beneath the flattened parts of the chest, diminish the value of percussion; of course all the parts in this region are misplaced—that is, in case of Chang, the liver, and in Eng, the heart. When the liver of the right and the heart of the left are examined more closely, we find that they lie almost in a normal position. From this fact alone I would conclude, that there is nothing of importance pertaining either to the vascular system or to the liver contained in the connecting bridge.

The fact is, that in addition to the already mentioned parts, we only feel soft and unresisting masses.* These

* The Siamese only allowed examinations of the connecting link with great reluctance. *Geoffrey St. Hilaire* (Hist. des. anat. Paris, I. III, p. 86),

otherwise rather plentiful masses can only be of adipose tissue, as is found in other instances. Probably, there are prolongations from below upwards of the bridge, which fill up during cough, but this tympanitis does not, as was formerly stated, extend into the middle; no, in the middle the parts remain unchanged (Beigle Berl. Clin. Wochensh. 1869., No. 14, p. 147), and we can not elicit intestinal resonance from this part.

Viewed from this aspect, it may be supposed that in case of the great misfortune, that one of the twins were to die sooner than the other, an operation would be necessitated. Warren also expressed this view. It must here be considered, that in case of the death of one, the operation would have to be performed near the body of this one in order to prevent endangering the life of the other brother.

I learn from the literature on the subject, that in a majority of the cases in which double monsters have reached old age, the decline in the latter part of their life was an exceedingly rapid one, and that the twin who originally was not ill soon experienced such an aggravation of his infirmities, that his death occurred immediately following, or even coincident with that of the other. This is very remarkable, and it is, as yet, unexplained, what is the reason of this rapid decline. Thus it is stated of the world-renowned Hungarian girls (Helena and Judith, born 1701), the twins who were entirely separate and distinct, with the exception of the breech, the rectum, and a part of the vagina, and who reached the age of twenty-two, that one of them was affected by a severe pulmonary and cerebral attack, while the other remained well for a few days, only suffering from slight *malaise;* soon her powers gave way also with great rapidity, and after a short agony she died in the same instant with her sister, without there being anything to account for this mishap. The same is recorded of divers other

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said, that owing to this he was unable to come to any definite conclusions about them. It is evidently not only sensitiveness, but fear and distrustfulness that the band may be in some way injured.

cases, only *Licetus*, who has written so many remarkable things, published a case, in which a twin was said to have lived for a number of years after its mate had died. He also quotes from *St. Augustine*, an instance of xiphodymous male double formation, born in Emmaus in Palestine, which lived 2 years, and in which one of the boys was said to have lived four days longer than the other. Another such instance has been observed (Geoff. St. Hilaire, Hist. des anom. Paris, 1836, vol. 3, p. 174). I only find one case mentioned (Meckel Handb. der pathol. anat., Leipz. 1816, Bd. II. S. 60), where, in a female mesophagic mal-formation, one child died in its tenth year, and was detached, the second, however, died soon after, in consequence of the wound inflicted.

The older authors have also discussed a third point, which gave them great uneasiness: namely, in the case of the Hungarian girls, who spent the last twelve years of their lives in a convent at Presburg, it was very naturally questioned (*Waldschmiedt* Disc. de sororibus gemellis Kline 1709, p. 29. *G. C. Werther*, Disp. de monstro hungarico, Lips. 1707, p. 19) whether these beings would appear in the world to come in the same shape as they now appear; and in case that one of the girls were to commit any sinful act, and in consequence were sentenced to the pains of hell, how, in this event, the forgiveness of God would be exercised? I only mention this, because, however remarkable such a query must appear to us, we must remember that hardly one hundred years have passed since this question was discussed. In all probability our epigones, one hundred years hence, will find it just as ludicrous, that in the case of the Siamese a similar question was put: Is there really an individuality of life and soul in these two bodies?

As soon as development has reached such perfection, as soon as a normal formation of the circulatory and nervous apparatus is presented, as in this case, no one ought to doubt that we have two perfect, also mentally distinct, beings before us. It may be surprising to witness the great harmony

which these two beings have preserved. The regular, physiological as well as pathologically harmonious mode of life which they lead, has saved them, during the sixty years of their existence, from any serious dispute with each other. This appears very remarkable. But we must be content to explain this habitual agreement that also their mental apparatus was developed from a single germ, as was the case of their entire economy. It all depends upon a kind of *hereditary homology* of both subjects. As they originated from a single germ, and as their brains were developed from an originally identical deposit, it is easily understood that these as well as the remaining organs of the bodies are similarly formed. There is only a single spot, and that on the common link, where both brothers have the same sensations, that is, where the nerves from both sides are united. This space, as already stated by Warren, is only an inch in width, and surrounds the entire bridge. It corresponds to that point where there is a lack of muscular structure. On each side of this zone everything is "individualized." But everything is harmonious not only in structure and appearance, but also in its functions. Respiration, heart-beats, the movements of the body in general, harmonize so much that it appears as if their movements were directed by one will. This impression is hightened on witnessing rapid and sudden movements. They told me, that they also go hunting, and when I asked them what they did there, they smiled, and only raised their arm as if holding a gun, so suddenly, as if they were impelled to it by an electric shock. They are in the same way animated by anger, fear and excitement. Nevertheless, we must be satisfied to trace back this accordance to a common habit and education. This harmony has latterly been disturbed by the fact that they are growing deaf and, at that, one of the brothers more rapidly than the other.

All statements which hitherto have been made concerning an *absolute* harmony of the nervous functions are false. The twins, it is true, do everything in common; they walk, and

rest, sleep and wake, eat and drink, in common. But this harmony does not extend into the minutest details, and they exist only under identical circumstances. They disappear under the influence of circumstances affecting their volition. Just as the pulse of one may diminish or increase in frequency without the other participating in this change, just as each can do whatever he desires, so is it with the exercise of their mental functions. Each of them only feels the ills of his own body and not that of his brother. Each reasons according to the impressions that he receives, and the deafer one of the two is occasionally silent, when his brother answers a question that may be put to him, while other questions are answered by both together. They conduct themselves in this respect only slightly different from ordinary homologous twins, who originate from a single germ but have reached a separate development.

It must be remembered, however, that a condition of such intimacy must produce various, and not always symmetrical disturbances. Just as Chang and Eng evince, on different sides of their body—one on the right, the other on the left—certain deformities, which not only affect the chest but also the eyes and the extremities, so in other circumstances, principally in case of greater fusion, a greater or less deformity of one or the other body supervenes. In the meeting of this Society, on April 14, 1869 (Berl. Clin. Wochenschr. No. 19), I discussed this event in the case of the Dirschau marvel, whose sacral swelling may be considered as a defective form of xiphophagic duplicity. It is assuredly of great importance to know, that among xiphophagics who are separated entirely with the exception of a small space on the umbilicus, very characteristic deformities occur, although life is not jeopardized by them. The celebrated Danish anatomist *Thomas Bartholieux* (Hist anat rar. Cent 1 hist 66), as well as *Licetus* (p. 114, 117, 273), have left us descriptions of Lazarus Colloredo, born in Genoa in the year 1617, who carried on his breast and and on that part where the bridge of the Siamese is situated, another deformity in the true

sense of the word, which never arrived at an independent mental existence, but seems to have remained in a somnolent condition. This implanted twin, called John, whose large head hung downward, had only one leg, three fingers on each hand, and was very defective in his bodily development. His twin brother, Lazarus, a very elegant gentleman, aged twenty-eight years (at the time of Bartholieux), carried this incubus around with himself, generally hiding it under his Spanish cloak, to protect it from the inclement weather. Nothing is known of the later life of these two brothers.

To this variety of defective xiphophagy, which Geoff. St. Hilaire calls heterophagie, two other varieties may be added, *i. e.* the heterodelphie and the heterodymie, characterized by this that the shrunken twin (fraterculus), in the first case, had no head; in the second, neither head nor extremities; or, to express myself differently, heterodelphy is xiphophagy with acephaly, heterodymic on the other hand, xiphophagy with amorphy (*anedie*) of the parasitic twin. This has peculiar interest in reference to our case, and it is a peculiar coincidence that one of the most remarkable cases of heterodelphy, which was observed in an adult, also occurred in a Chinese (Geoff. St. Hilaire, l. c. III, p. 226. Pl. XVIII, fig. 4.)

I must add that a double formation, quite analogous to xiphophagy, occurs very often in fishes, principally in those raised artificially, and I have the pleasure to be able to exhibit several specimens belonging to our collection. A lawless pisciculturist sent these to me, in reward for an address which I once delivered on pisciculture, expressly stating that otherwise our ideas were very different. We can see the whole series of double formations, from the most perfect development of the two bodies, to the most deformed condition of one or both. These double monsters, among fish, are peculiarly fitted to show, at a very early period of development, how a double formation can be produced by a single ovum.

ART. III. — UTERINE HÆMORRHAGE WITH ANTAGONISTIC DIAGNOSES, IN REGARD TO THE RESULTS. By B. P. REESE, M. D., Augusta County, Virginia.

Saturday morning, September 24, 1870, about 3 o'clock, A. M., I was called to the country, about two miles, to visit a case of abortion of about three months' pregnancy. Upon my entering the room, the poor woman exclaimed, "Doctor, please do something for me; I have bled nearly to death!" Her blanched appearance corroborated her statement, and the blood had run through her bed to the floor beneath.

Upon examination I found the vagina filled with clots of blood, and imbedded in them I found a Meigs ring pessary and the fœtus. The pessary had been applied some time before pregnancy for prolapsus uteri, and she had failed to apply to her physician to have it removed. The placenta I found grasped by the os uteri with a small portion projecting into the vagina. I removed as much as I could with my fingers, and the hæmorrhage continuing, I thought it best, in her very feeble condition, to try and arrest the hæmorrhage and wait for her to rally some before making further efforts; so I applied a tampon of cloth, which had the desired effect, and I left the case very comfortable under the circumstances, with strict orders if there was any appearance of hæmorrhage, to let me know at once. I saw her husband during the day, who said she was doing well. In the afternoon I visited her again and removed the tampon and found there had been very little hæmorrhage. I omitted to state, when I first left her I ordered, vin. of ergot in ʒi doses, every three hours, and some brandy toddy. I again attempted to remove the remaining portion of placenta, but finding it impossible, I concluded to wait, hoping the womb would repel it. I directed a continuance of ergot, brandy toddy, and ordered a pill composed of iron, quinine and gentian. The following day (Sunday), feeling very unwell myself, I did not visit the case.

Monday morning early, before I had dressed myself, her husband was at my door for me to see his wife at once, as she had not slept during the night from pains in the back. I saw her between eight and nine o'clock, and her mother informed me that just before day her daughter complained of a pain in her hip, and upon examination she thought the hip swollen, and there was a bruised looking place, and she was afraid it would peel. I examined the hip, and found, just opposite the greater sciatic notch, and over the glutæus magnus muscle, a dark livid spot, the size of the palm of my hand, with yellow tinged margin, presenting all the appearances of a bruise. The first impression upon my mind was, she had from a fall or lick in some way bruised herself, and from the intense pain she complained of, an abscess was forming—I directed a milk and bread poultice, and an opiate, together with a liniment of tinct. aconite, spt. ammo. and chloroform, to rub the back, and returned home. Before leaving, however, I ascertained the remaing portion of placenta had passed off, and there was no hæmorrhage.

About two o'clock that afternoon her husband came to my office in a great state of excitement, saying his wife would not live until I could get to see her, and the black place had spread rapidly, extending up her back; that he desired I should go at once and take Dr. Hinkel along, as he believed his wife would have lock-jaw.

The doctor and myself went out as soon as possible, and the spreading had extended over the whole glutæi muscles and extended some distance up the back. She was quite feeble, but rational and appeared much excited. Her mother with some friends, were around the bed, crying. The whole nates seemed distended with gas, and upon percussion sounded like a drumhead, with a dark livid hue. It presented to us quite a novel case, and Dr. H. thought, perhaps, some capillaries had been ruptured, producing ecchymosis. Pyæmia suggested itself to my mind and I mentioned it to Dr. H., but we decided to make a small incision, which was made by Dr. H., and a little gas, with bloody looking water,

ran out. The parts seemed perfectly insensible to the incision. We both examined her per vaginam and found nothing wrong; the os patulous, but not more so than it should be under the circumstances. We directed lint, saturated with the chloroform liniment I had before ordered, to be applied over the parts every two or three hours, and returned home.

About 6 o'clock that same evening her husband came for me again and said he did not think his wife could possibly live until morning, and desired I should see her again with Dr. Fauntleroy. Dr. F. started a little in advance of me, and when I got there I found him at the house. I gave him the previous history of the case, and upon examination we found the swelling with the dark livid hue had extended down the thigh two-thirds of the way and into the groin, with the same drum-like sound over the whole swollen surface. While Dr. F. was examining the parts, I went around the bed to her head (she was lying across the bed upon one elbow, with her face between her hands), and examined her pulse, which I found very feeble, and spoke to her, without any response. I returned, and Dr. F. then went to her head, and upon examination found her dead.

I have now given a simple, plain, unvarnished history of a case which, I must confess, is involved in some mystery to me. I have never seen the like before. Dr. Fauntleroy pronounced it a case of Phlegmonous Erysipelas, but I am of the opinion it was a case of Pyæmia, or Septicæmia, caused either by the retained placenta or some detachment of the placenta prior to the abortion, which might have been instrumental in producing it. The poor woman could assign no reason for her aborting except from washing the day previous—a labor to which she had been accustomed. I would be glad to have an opinion from you or some other physician upon the diagnosis of the case.

Art. IV.—Treatment of Gonorrhœa by Local Means. By Thomas Hill, M. D., of Kennansville, North Carolina.

It would be a waste of time, at this late day, to go into a discussion to prove the local nature of gonorrhœa. I believe it is a fact, generally admitted, that gonorrhœa is an inflammation of the mucous follicles of the urethra, with a discharge from the mucous membrane, produced by contagion from a similar discharge during sexual connection.

The very first case of this disease I was called to treat, the question presented itself to my mind, why, if this is a local disease, should I treat it constitutionally? Why fill the stomach with such nauseous drugs as copaiba, cubebs and all such gums? Why may not this inflammation, purely local in its character, be treated as a simple local inflammation? Then if the specific disease still persists, if these remedies have a specific effect, why not apply them directly to the disease? I was not long in making up my mind to test the accuracy of my reasonings. I ordered the patient to retire at once to bed; gave him a syringe and directed that he should inject cold water into the urethra every half hour during the day, and to keep a cloth wet with cold water applied all the time to the parts. The next morning, on visiting him, I found the inflammation almost gone, and the discharge much thinner and of a lighter color. I had, in the meantime, prepared a bottle of Chapman's mixture, which I then directed him to inject once every four hours, the cold water to be continued. This treatment was continued for two days, when the case was, to all appearance, cured; to make assurance doubly sure though, he was directed to use the mixture twice a day, for a few days. He had no further trouble.

For the last fifteen years this has been my practice, sometimes using the copaiba, at others, sulph. zinci, tannin, etc. During the last twelve months, having witnessed the admirable effect of carbolic acid in the treatment of local inflammation and destroying specific virus, I determined to

try its effects in gonorrhœa. After subduing the inflammation with cold water, I prepared the following:

℞—Acid carbolic, gts. v to x,
Glycerin,
Water āā ʒss, M.

This to be used three times in the twenty-four hours. I have yet to see the patient, who followed these directions, who was not entirely relieved in three days. I look upon rest in the recumbent position as absolutely requisite. If any internal remedy is necessary, a good dose of epsom salts will be found the best. If the scalding of the urine be very severe, a teaspoonful of bicarb. soda in a tumbler of water, twice a day, will be found very effectual.

I have never seen any injurious results follow from the above treatment—such as stricture, swelled testicle, etc.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—PEN PICTURES OF CLASSIC MEN AND CLASSIC SCENES IN EUROPE. By JOSEPH PANCOAST, M. D., Philadelphia, Pennsylvania.

There are, as you are well aware, but four great medical and surgical schools in the world—the French, German, British and American. In Spain, which I thoroughly visited, I met, it is true, with many accomplished gentlemen in our profession, who displayed, in my intercourse with them, the characteristic courtesy of that once great people. But in that country every scientific effort toward advancement in our profession is so entrammeled by the deplorable ignorance and bigotry which exist even among the rulers of society, that the Spanish school has not been able to attain

any elevated rank, and is made up mainly of French doctrines at second hand.

The Italian school is immeasurably in advance of the Spanish, though sunk infinitely below the position it once occupied, when, in the days of Fabricius, Malpighi, Morgagni and Scarpa, it was the anatomical and surgical teacher of the world. Not that Italy is now altogether devoid of prominent medical men; I have found able surgeons in Naples, Florence and Bologna, and you are all familiar with the reputation of Pacchini, of Florence, the discoverer of those singular nervous bodies that bear his name, whom I found one of the most intelligent, warm-hearted and interesting men that I ever had the happiness to meet.

As I walked through the ancient palatial seats of learning at Bologna and Padua, I could but mourn over their decline in reputation from those bright and palmy days of grandeur, when their halls were thronged with the most aspiring students from all parts of Europe. The escutcheons belonging to the name and race of the more distinguished still hang in great numbers upon the walls, among which I observed that of the celebrated Harvey, the discoverer of the circulation. He was a student of Padua, and gleaned from the teachings of Fabricius of Aquapendente an insight into the mysteries of the vascular system, which led to his discovery of the circulation, and made his name famous for all time.

This lecture-room of old Fabricius, the authorities have had the good taste to preserve unchanged down to the present time. What appearance, think you, it presents?—a spacious theater, with cushioned seats, on which his audience could have reclined at ease? No, indeed. It is but a tall, narrow circular chamber, much smaller than the old lecture-room of the Pennsylvania Hospital; like a punch-bowl in shape, with narrow galleries running around, in which the students could merely squeeze themselves in a standing posture, in order to observe the demonstrations of the great man below.

But there is hope yet for Italy. Her skies remain as fair, and her soil as fertile as ever, and a brighter sun shines in her political horizon. There is yet hope for the Italian people, for they still honor their great names of the past. So I felt as I stood in the beautiful lecture-room of Bologna. The ceiling of this theater was frescoed in the highest style of art—Apollo in relief, suspended from the center; a Cupid placed upon one hand, a female figure, representing Fame,

on the other, with all the Muses gracefully grouped around. About the sides of the room, dressed in their flowing professorial robes, stood the statues of Malpighi, Bartolinus, Varolius, Arantius, and the learned Taliacotius, the inventor of the Italian method of rhinoplasty. This image of the great father of plastic surgery held the model of a nose in his left hand, such as he made from the skin of the arm, and which he seemed to regard with singular complacency. In the passage adjoining stood the great oculist of his day, with two eyes painted in the palms of his hands, emblematic of his art, and the manual dexterity for which he was so famous. And in a corner, quiet as the stone of which she was made, sat Laura Bassi, the once famous doctress of laws and lecturer on philosophy, a character such as Shakespeare might possibly have had in his mind when he drew his beautiful picture of Portia.

But let me take you on with me in my journey into Germany. I arrived in Vienna the evening of the day on which, by a vote of the parliament, the Roman Concordat had been broken. Rokitansky, the pathological anatomist, who had been ennobled by the Emperor, had just made a liberal speech, with which the town was ringing. The streets were blocked with an excited and huzzaing crowd, and the people were happy, as they felt that now all denominations might intermarry without the assent of the heirarchy.

We will first make a visit to the Royal Imperial General Hospital of Vienna—the Königlich, Kaiserlich Allgemeinen Krankenhause. We will leave the compact central portion of the city behind us, with its concentric streets made to suit the walls of olden time. We will pass out by the Scotch Gate, or Schotten Thor, cross the wide and windy glacis or esplanade, and enter, a mile and a half further on, one of the great enveloping suburbs of Vienna, called the Alsorforstadt. Here is the great hospital, covering a space of ground, equal to two of our city squares, surrounded on each side with hospital buildings. The interior space is intersected east and west, north and south, with rows of continuous houses, which likewise serve for hospital wards, habitations for some of the professors, baths, and lecture-rooms. Two giants of porters, with cocked-hats and harlequin-like habiliments, usually stand, like Gog and Magog, guardians at the portal. This hospital is a little city of itself, with some thousands of inhabitants of both sexes, com-

prised in the main of the sick, the deformed, the parturient, and the dying. Here is accumulated almost every variety of disease, even cases of such a disgusting nature that you almost shrink as you go your rounds from coming in contact with the walls or furniture.

The professors of clinical surgery are Baron Domreicher and Bilroth, both distinguished men, who hold twice a week varied and interesting clinics; but they will exhibit little that is new, or that would be particularly interesting to recapitulate here. Domreicher still uses the waxed thread in place of the wire ligature in the treatment of vesico-vaginal fistula, and Bilroth has displaced the upper jaw-bone in order to cut the root of the third branch of the fifth pair of nerves for facial neuralgia, which is done by a much less dangerous process in this country. I heard him in a lecture encomiastic of American ingenuity as displayed in the manufacture of artificial limbs, describe an amusing race which took place some years ago in front of our exchange on Dock street, in which, he said, a man with only one artificial leg was beaten by his antagonist who had two.

We will go now with the small crowd that is hurrying to attend the world-renowned clinic of Professor Hebra, the man who justly holds the highest place in the world's estimation for his skill in the diagnosis and treatment of the complicated and multifarious diseases of the skin, who has, in his career, treated more than 10,000 cases of smallpox and other cutaneous diseases in proportion, and given to the world pictorial representations of them that have never been equaled.

Punctual to the hour affixed for his private course, in rolls a short man with a round and portly person, and features expressive of great sprightliness and intelligence. This is Prof. Hebra. He hangs up his hat on a peg—a fashion in which all follow him. His rostrum is a chair placed within on a slightly raised platform about twelve feet square. Upon this platform the patients are introduced, one by one, and passed along the inner side of the railing so as to exhibit their diseases to the students ranged round it without.

Most of the varieties of skin disease pass before him in the course of these lectures—syphilis, psoriasis, itch, lupus, prurigo, *et id genus omne*, are diagnosed with wonderful acumen and judiciously treated. Your trust in his accuracy can not be withheld. For in cases where the nature of the

disease is ambiguous or mixed, and they are often so, he has the manliness to tell you that he must withhold his opinion for another day, or till he sees the proper grounds for a diagnosis.

The examination of each case is, however, thoroughly made. No vestments stand in the way, whatever the sex may be, and there is at least no mock sentimentality on either side. Occasionally a man may enter six feet high, perhaps, step up upon the platform with military precision, and dropping a loose gown from about him, make a formal profound obeisance in a state as naked as was Adam before he began tailoring with fig leaves.

Prof. Hebra believes in the unity of syphilis, as does his colleague Prof. Sigmund, and uses mercury and sulphur in its treatment as we do. But the mode of using mercury, especially in the secondary and tertiary forms, at present in vogue with both these gentlemen, is to inject under the skin once daily the tenth part of a grain of corrosive sublimate for an adult, and the thirtieth for a child. Small as this amount is, it does not do to exceed it, or it will excite nausea and vomiting. It is thrown in, in solution, with the hypodermic syringe, under the skin of the buttocks, at the lower point of the scapula, or over the insertion of the deltoid muscle. They will tell you, however, that the value of this process is yet under trial.

The plan is to continue the treatment for twenty separate injections, and then observe the results; if necessary, recommencing the injections again after a few days. Small as is the amount of the sublimate thus introduced, it can after ten days be detected in the urine. And this is not strange; for the use of chemical tests is now brought to such a great degree of perfection that it is boldly asserted that the presence of .020 part of a grain of quinia can be detected in the urine by the means of the spectrum and the passing of an electric current through the fluid, catching the quinia on a piece of gold leaf.

The well-known compound sulphur bath of Fleming, the Surgeon-in-Chief to the Belgic armies, is the one commonly used, especially in tertiary syphilis and psoriasis. It is applied, according to the case, from two to six hours, and if you look around, you will see almost at any time a dozen male patients floating about like so many seals in one common bath tub. It is his treatment, too, for the itch, which he says he cures with this bath in half an hour, killing at

once the insects and addling the strings of eggs which they lay along so nicely in little galleries beneath the skin. It says little for the cleanliness of the habits of the people of Vienna that this disgusting disease should be so common there. It is so often found, even among the higher classes, that Hebra will tell you he finds it convenient to use a popular preparation, charged with aromatics, that he calls his aristocratic itch ointment. Even the cats and dogs of Vienna, he says, suffer with the same disease, produced by the same insect. In bad cases of pemphigus, when the bullæ have given place to a delicate and imperfect cuticle, he lays his patients in a bath of perpetually flowing water, and when taken out they are dressed in an India-rubber vest and pantaloons, and even the face covered with pieces of India-rubber cloth. Bad cases of hopeless burns are put into this perpetual bath, where they find themselves easier than elsewhere, and, as Hebra will tell you, die very comfortably. But it would be tedious to go into a description of this bath, with its inclined bed and its windlass arrangement, or of his famous tar bath, or of his habit of scrubbing the bodies of his patients over with the strongest kind of soap when the skin is insensitive and incapable of absorption. When there is much cutaneous sensitiveness then the cocoa-nut oil soap is used. A friend in Vienna told me he was using, with excellent effect, this coconussenoilsodaseife in the case of a Constantinopolitanisherdudelsackpfeifer—that is to say, he was using the cocoa-nut oil soda soap in the case of a Constantinople bagpipe player.

Some simple rules Hebra follows closely in getting at the differential diagnosis between syphilis and common psoriasis. He tells you that syphilitic eruptions never itch like psoriasis; that they come frequently in the bend of the arm and in the ham, psoriasis never; and that syphilitic sores always produce a loss of tissue, and that others usually do not.

Professor Sigmund exonerates our country from the supposed opprobrium of having originated the syphilitic poison. He says it is described in the Bible as many had previously supposed, and showed me a pamphlet just published by a learned Jewish physician in which it is said that Luther, out of commendable modesty, has purposely mistranslated the passage.

To Prof. Sigmund we are indebted for the knowledge of the important fact that the raw ulcerations on the side of the tongue, and called syphilitic psoriasis, are very conta-

gious. From ignorance on this point, he has seen the most deplorable consequences follow, as many of us have done—the infected child poisoning the nurse at whose breast it sucks; the diseased nurse poisoning the child, by first chewing its food in her own mouth; and the most innocent and pure-minded have their systems infected simply by the kiss of a brother or other near relative.

But let us now shake off any infection that may attach to our garments in this place, and move on in another direction.

There is in Vienna, as well as in other parts of the world, a vicious tendency to the narrowing down of the medical mind to the littleness of specialism. This arises in part from the terrible competition among professional men in Europe, and is maintained partly by the ignorance of the public in respect to the breadth of our science, and the intimate relationship of all its parts.

Among the able men, assistant professors in the hospital, there are two who have devoted themselves to the use of the laryngoscope. They have obtained great address in the use of their instruments, but are disposed, on account of the narrowness of the field they occupy, to exaggerate its importance in justification of their own devotion to it.

I saw tumors again and again pinched off from the vocal chords with cutting forceps, and a chicken bone withdrawn from the larynx after weeks of manipulation, but with injury to the vocal chords and permanent loss of voice, and I feel assured I have had a better result in analogous cases, by splitting up the cartilages, and at once removing the foreign body.

Nor is the plan they pursue without danger. It is their custom to produce previous anæsthesia of the glottis by mopping it with a solution of twenty grains of morphia to one ounce of water. There is risk of too great absorption of the morphia, and a fatal case occurred from this cause during my visit.

Professor Gruber, a prominent and distinguished man, has devoted himself to the diseases of the ear. With great apparent subtlety of diagnosis, he alleges that many cases of deafness arise from a depression of the tympanic membrane, and its attachment to the promonitory on the opposite bony wall. In such cases he does not hesitate to make a semicircular division of the tympanic membrane, for the purpose of cutting this adhesion, subsequently keeping the mem-

brane in its proper place, by the insufflation of air through the Eustachian tube. Of the full value of this process, though I acknowledge its ingenuity, I was not able to form an opinion. This gentleman has, however, given us a work on the subject of much anatomical and physiological importance.

We will now pass beyond the rooms where these specialists are at work, and enter the large wards of Professor Skoda. It is near the close of the session, and as he goes his rounds, he is examining, over his patients, some of his students for their degrees.

We shall find this eminent physician, seated near his patient, putting his questions with a small, thin voice to one of the class. The candidate stands up, the patient listening attentively, strangers observing, and the eyes of all his fellow-students concentrated on the candidate.

The questions and answers are in relation to the diagnosis, history, treatment, and prognosis of the case. They are in German, the Latin language only being used when the nature of the subject might be distressing to the patient.

The student often blunders, and is corrected bluntly by the Professor, but, to the credit of the class, his blunders are not treated with ridicule.

A sort of fellow-feeling, a consciousness that they will all have to undergo a similar ordeal, keeps quiet and decorous a class of students not otherwise particularly distinguished by marks of good breeding or elevated deportment.

You will be struck as you follow the rounds of the wards, as I was on this and preceding visits, both with the completeness of Professor Skoda's diagnosis, and the seeming insufficiency of his treatment. He investigates as if he was examining into the operations of a brute machine, and prescribes as if he had little faith in his remedies; seemingly forgetful that the chief value of so much toil and labor as he has bestowed on physical diagnosis is to discover the best means for the relief of human ailments.

We will now pass to the newly-erected and handsome structure in one corner of the square, to which the dead are carried. This is under the supervision of the great pathological anatomist, Rokitansky. But he now no longer lectures except in the didactic course of the University.

Sheitow and Bisiedecki were his able assistants. The dissection of every cadaver is here made in the most thorough manner, and the students who form the private classes

of these gentlemen are well instructed in the changes that disease produces.

Perhaps they are induced to devote too much time to the use of the microscope on some favorite subjects, to the neglect of the wider and grander field of general pathology.

The demonstrations here are early in the morning. As we leave this interesting spot, we pass on our return near the obstetrical department, under the care of Professors Shote and Braun.

We will enter there. It contains 600 beds, and 10,000 births take place there yearly. The patients are taken in only during the last month of their prègnancy. Graduates who pay the private fee, and bribe the nurses, get cases in abundance, even those requiring the use of the forceps, and are able to secure patients in advance, by writing their names over the beds. Twenty placentas are lying on the table, the product of the preceding night.

The patients are carried into one room to be confined, and are transported back on a litter to another when the trouble is over.

No belly-bandage is put on ordinarily. If there is after hæmorrhage, cold is applied to the abdomen, or cold water injections made into the vagina; if it prove very obstinate, then one or two drachms of the tincture of the sesquichloride of iron, diluted in a pint of water, is thrown into the uterus. If bleeding is still continued, then a belly-bandage is applied, a proceeding which I believe few judicious obstetricians in this country would so long delay. Every infant is swathed like a mummy, or an Indian pappoose, and so kept for months, bound up so tightly in bandages that they rock it by rolling it on the bed as they would rock a cradle. The attendants even seemed to have no idea that infants were differently treated in other parts of the world. There are no regular lectures here; nothing purely didactic in midwifery or any other branch. What the chance practice offers, they lecture on, either at the bedside, or by adjournment to the lecture-room adjoining, so that if during the course there were five cases of placenta prævia, there would be five lectures on it. If no case, no lectures on the subject. This is one of the great faults of the institution.

There is a great chattering now in the lecture-room, as if a big school had broken loose.

Look in there. You will see sixty or seventy women, all students of this branch, between the ages of 20 and 35; some

sitting, some half-reclining on the seats, some perched on the backs of the benches. They are waiting for the professor who lectures to them to-day. They come from all parts of the wide Austrian empire, stay about two months, are instructed free of expense, have regular practice in the wards, and are sent back home again, to attend, after a fashion, at the advent of the future subjects of his imperial majesty.

The mother, after the birth of the child, remains in the institution only nine days, in case all goes well, and makes her exit leaving her babe behind her.

Would you like to know what becomes of these little innocents? Thereby hangs a lamentable story. The child, if strong, is sent at once out into the country to nurse: poor women taking five or six at a time for a mere pittance, and bringing them up as they best can. One-half die during the first year. A register is kept. The name of the mother and the date of her entry are entered there, and a piece of tape with the number of the birth for that year marked on it with indelible ink is sewed round the left wrist of the child. This is kept carefully on the wrist till the child is six years old, up to which period the mother may reclaim it. The name of the nurse is also registered, and as she never lives more than a few miles distant, the mother can call and inquire after the infant. If the child is maltreated in any way it is recalled and another nurse substituted.

I was witness to a scene where an infant bearing on its arm the No. 2,478 had been brought back because the nurse had beaten it, and the mother, a decently clad woman, had come to see it. She mourned over it like another Rachel refusing to be comforted, calling it her little angel, and many other endearing epithets which I could hardly make out between her sobs and sighs, and her broken language.

Many of the young infants are too delicate to be sent at once into the country. They are transferred to the foundling hospital across the street, and such of the young mothers as are capable of nursing two children are placed over there for three months, in order to take them under their charge. Admirable order is preserved in this institution, but it presents a miserable spectacle.

The selfish instincts of poor human nature would always lead the mother to foster more kindly her own offspring than the little stranger she was constrained at the same time to hold to her breast. I could always distinguish the wan, pale, often sightless face of the one, from the plump, rosy

cheek of the other, and would win a smile from the young earnest face of the mother by saying this is your own.

The number of children constantly connected with this institution is 20,000. Many die; few are reclaimed. At the ages of six or seven they are bound out to service, and, if boys, usually find their destination in the army.

But enough of such a subject. Let us pass on to Berlin, and see that distinguished pathologist, enlightened statesman, and amiable gentleman, Professor Virchow, whose name is familiar to you all. His genius is of so versatile a nature that often on the same day he will give a lecture on some abstruse point in pathology, and a flowing oration from his place in the chamber of representatives.

I had the pleasure of listening to the first two lectures of his course, which are called his railroad lectures. The room he occupies was built expressly for him; it is about fifty feet square. The floor and seats are on a level, and the tables so arranged in zigzag lines that a little railroad track with turn-tables at the corners is continuous round the room. On this track nine microscopes were mounted on wheels, and made to pass round the room by being pushed on from student to student, as each one examined the object displayed.

The professor, of middle age, medium hight, and prepossessing appearance, stood in one corner of the room with a blackboard and towel hanging behind him. Five students were in another corner arranging the microscopes. Before these were put in motion, pathological preparations on dishes were passed round the tables under the noses of the students. The professor would describe one specimen, and set it agoing, then take up another. Thus four or five would be put in motion successively, and be making at the same time the circuit of the room. It was evident that the students had great difficulty to connect the descriptions they had heard with the right preparations. The same difficulty, too, must attend the use of the microscopes.

At the second lecture the main scenic effect consisted in the arrangement on a large table of a dozen wooden platters filled with pathological specimens. In one there was the skullcap and brain of a man who had died from a blow on the head which had produced suppuration between the membranes. The spleen and the liver on another, showing the commencement of metastatic abscesses. Here a portion of a pelvis showing the early stage of inflammation in the

hip-joint. On another plate were the lungs and heart. The great and small intestines were displayed on another, the latter ridded out and split open, and laid in longitudinal rows like the ruffles on a shirt. And again we had other plates containing the bladder and kidneys and diseased mesenteric glands.

The object of the second lecture was to show the effects of inflammation on the different tissues according to Virchow's peculiar theory.

As Schwann showed all living bodies to consist of a series of cells, and all the normal acts of life to consist of cell-actions, so Virchow reduces all morbid processes to merely morbid cell-action; the effused lymph or plasma itself which occurs in inflammation consisting of substances that form cells.

The preparations on the table were briefly described, with the bowels and the diseased mesenteric glands. These were made the subject of a lecture for three-quarters of an hour, in which he used freely and neatly the blackboard. The object of the lecturer was to contrast the pathological differences between exanthematous and abdominal typhus.

The lecturer was not in this place oratorical, and there was good taste in that. He held his head down somewhat, hesitated often, seemed much communing with himself, stood now with one hand in his trowsers pocket, now with two, varying the position occasionally by putting them in his coat pockets behind his back; but he was learned in his subject and clear, and occasionally rose into animation. He is surely a man of distinction, and every way worthy of the high reputation he has achieved. I would that I had time here, which I have not, to give you his views more in detail.

There is a very great surgeon in Germany, and he resides in Berlin. His name is Langenbeck. A friend of former days, I was again indebted to him for much and unwearied attention, both public and private. I saw much of his interesting hospital practice, seated on the sofa in his operating room, where the celebrated Dieffenbach breathed his last, falling, like Liston, in the midst of his students, and in the theater where he had won his great renown. He is a man of middle age, thin, but enduring; not robust; an indefatigable worker, and an enthusiastic lover of his profession. He is a master in the art of plastic surgery.

Among the many meritorious things he has done, he has taught us the full value that is attached to the pre-

servation of the periosteum in bony resections, which, in all such operations, he previously most carefully peels off from the bone. He has shown most conclusively that three or more inches of the tibia may, after resection, be completely renewed by the preserved periosteum—a doctrine not new to us, however, as I heard it announced in my student days by Dr. John Rhea Barton of this city. But Langenbeck has more thoroughly displayed its importance. He states that he has seen even a new olecranon process, evolved by the periosteum after resection of the elbow-joint.

He has shown us how the upper jaw may be sawn through and swung back as on hinges, and be subsequently replaced, affording an opportunity to reach the bloody naso-palatine tumors, that are so difficult to manage—an operation which he had the goodness to exhibit to me on the cadaver.

He has given us several new and valuable methods for amputation at the ankle-joint. But I have not the time to mention here one-half the amount of indebtedness under which he has placed us.

Germany, if not the birth-place, has always been the field in which ophthalmological science has been most extensively cultivated. Vienna was formerly, but now Berlin is the great center from which most of the improvements in the treatment of eye diseases emanate. Of all ophthalmologists, the distinguished Graefe, of Berlin, at present, bears away the palm. Yet Arlt of Vienna, and Donders of Utrecht, are not far behind him. They have worked in the same field—three brothers in art, forming a constellation of stars of the first magnitude.

By the side of Graefe, an acquaintance of other days, and by that of Arlt of Vienna, it has been my good fortune to sit day by day and witness the care and skill with which they do the most delicate operations. I have also observed again and again the marvelous operative dexterity of the younger Desmarres, of Paris; the judgment and skill of the gentlemanly Liebrich of the same city, as well as the judicious and successful management of the eye by Bowman and Critchet, of London. I must defer to a later period much of my gleaning from these fruitful sources.

I have but time to say a few words in regard to the grand subject of the extraction of cataract. Sichel and Desmarres, of Paris, and the successor of Arlt, at Prague, are among the few who still hold on as the general rule to the old method of extraction without iridectomy which, when suc-

cessful, is unquestionably the most perfect and beautiful of all forms of cataract extraction. But it is attended with great hazard to the eye. The genius of Graefe has opened a surer path to success, by making a smaller exterior wound in the sclerotic margin, and cutting out at the same time a portion of the iris. This operation I have seen admirably done in the amphitheater since my return, and had often practiced it before I went abroad.

Graefe has done (he told me) this new operation eight hundred times, with a small proportion of failures. As I before observed, almost all eye surgeons follow Graefe's leading. Yet this extraction with iridectomy always leaves a deformity of the pupil—and, yet while admitting its great merits, there is not among surgeons any uniform method for its performance.

Graefe and Arlt always make the upper section cutting through the sclerotic coat; Bowman and Critchett make also the upper section, but cut out through the cornea. Liebrich, of Paris, makes the lower section, cutting out also through the cornea. Donders told me that he thought in a double cataract we ought to do Graefe's operation on one eye, and if that was successful, do the older, more perfect but more hazardous one, on the other; so that you will see even in this almost perfected operation much must be left, as in nearly every other surgical case, to the judgment and discrimination of the surgeon.

From the names I have mentioned, you may well infer that there is a wide field in Paris for the successful study of eye surgery; indeed, in all the branches of medical and surgical science, the greatest center of attraction is still, as it has been for the last two hundred years, the gay Parisian capital. From Paris we have derived our most complete systematic treatises on the different branches; the stethoscope of Laennec, the lithontriptor of Civiale which is steadily and surely in a great majority of cases displacing the lithotome, the ecraseur and drainage tubes of Chassaignac, with a host of other things which I need not mention.

It is true, I missed the great names and presence of many men with whom I had been familiar. Velpeau died during my visit, exclaiming with his last breath, "one must work and not idle!" and was followed to his tomb at Montmartre by distinguished men from almost all parts of the world. But there were great men before Agamemnon and have been since, and there are yet great men in Paris worthy

successors to Dupuytren, Bichat, and Velpeau. They exist in such numbers even, and of such exalted merit, that the very number seems to present a bar to individual prominence, and prevents any one peering up above his fellows, like Mont Blanc over his satellites of mountains; so that no single one in Paris, perhaps, has such individual prominence as Langenbeck in Berlin, Ferguson, Erichsen, and Paget in London, Syme and Pirrie in Scotland, or Butcher and Porter in Dublin. Yet Maisonneuve worthily holds the place of Dupuytren at the Hotel Dieu; Gosselin, that of Velpeau at La Charite; Richet, that of Lisfranc at La Pitie, and Baron Larrey, the place of his renowned father at the Val de Grace. These, and many others, are so distinguished by their great merit that they might serve alone to glorify the place in which they live. In Paris you are never at a loss, whatever may be the subject that you wish to cultivate. Every day clinics are open, where, if one comprehends the language, he may derive the choicest instruction.

This is not the place in which I can speak of my personal observations in Paris. But I must not omit to mention the name of our distinguished and amiable countryman, Dr. Marion Sims, of South Carolina. This is a gentleman of whom our whole country should be proud. He has been deservedly decorated by the French Emperor, in consequence of his having taught the surgeons of Europe how to cure one of the most afflictive forms of disease, which they previously did not know how to manage. And I know from my own observations that no one can excel him in the neatness and grace with which he performs his peculiar operations.

But I can not leave the French school without remarking that one finds there, though to a less degree than in Vienna, much that offends his ideas of propriety, especially in regard to the exposure of patients, male and female. But in Paris you find what you do not in Vienna, female *doctors*, who walk the wards with you and attend the clinical lectures. In the service of Gosselin at the Charite, there was a student of this sex that I frequently encountered. She was a youngish woman; I am glad to say not a citizen of ours. She went through the general ward with perfect nonchalance; looked quietly at the diseased parts, listened to lectures on gonorrhœa and syphilis, but displayed some modesty by walking a little ahead when a male catheter was to be

introduced. In the female wards she felt herself more at home, and took her place standing by the side of Gosselin. Here I had a fair opportunity to observe her. She was dressed in black, with a little black bonnet on her head, decorated with two red Provence roses at the side, and three little rose-buds, just beginning to open, more in front. She had an intelligent, not pretty face, with wide opening eyelids. The examination for the diseases of the vagina and rectum begins. The doctor has his back to the window, facing the table, which has steps to ascend it in front. The little woman also has her back to the window, with the class of students by her side. It was an external clinique. The patients came in from the streets, tolerably well dressed, and with a taste which is never entirely absent in France, even in women of the lower class. They mounted the rostrum sometimes with decorum, sometimes with a mischievous smile, that often ere the close was changed into a frown. Little time was lost; "montez, descendez," was the cry of Gosselin. The speculum was used, and caustic or tannin applied. The doctor would describe the signs of disease that he saw. The students would then bend their heads to bring them in a line with the speculum, and the little woman in turn would drop her head to get a look into the mysterious depths of the instrument. In one case the patient presented large rupiose syphilitic ulcers on her limbs and body. When about to dismiss this patient M. Gosselin gave her a lecture in very plain language in regard to her future deportment, to which the little rose-buds nodded approval. After such examinations a regular lecture is given on the cases in the adjoining theatre.

Of the surgeons of Great Britain, with whose opinions in our common language you must needs be more familiar, it is not necessary that I should here say much, even were longer time allowed me. I shall confine myself, in this brief notice, to the two more novel points in surgical practice there, the value of which can not as yet be considered settled. I allude to the use of acupressure after the manner of Sir James Y. Simpson, and the carbolic acid antiseptic treatment, which Professor Lister, of Glasgow, now of Edinburgh, following some of the French surgeons, is most thoroughly investigating.

Acupressure is no new subject in this city. I myself introduced its use some years ago into this Clinic and in my service at the Pennsylvania Hospital, and its practical

value has since been more fully observed by the present distinguished surgeons of that and other institutions in this city. Its object is, as you know, to secure the bleeding vessels without killing a piece of flesh with the ligature, and leaving that as a dead part in the wound, to provoke suppuration and endanger pyæmia. The practice of acupressure, I observed, was growing into favor in many parts of the Continent, and even Professor Syme, of Edinburgh, who has always opposed the method, pays a silent tribute to it, by substituting for the ligature, the old-fashioned method of twisting the arteries, even vessels of the size of the radial and ulnar after the manner of Amussat. Professors Pirrie and Keith, of Aberdeen, have done most in perfecting this process, and find a wire loop, with a quarter twist of the wire on the needle, sufficient even for the larger arteries. It is impossible to say as yet how far we can extend beneficially the use of the method of acupressure. It is now used in a very simple way, to make pressure on the trunk of a vessel, in order to arrest the bleeding from some of its distant branches. And I think it quite possible it may yet be found reliable in the treatment of some forms of aneurism. Surely we must all admit, that we owe a great debt to that distinguished obstetrician and good man, Prof. Simpson, for its introduction.

The antiseptic treatment, by the use in various ways of carbolic acid, is considered by the distinguished Prof. Syme as marking a new era in surgical treatment. But its value is by no manner of means generally established. Prof. Lister, the son-in-law of Mr. Syme, is its greatest advocate. The theoretic grounds upon which the doctrine is erected are these: That there are septic germs floating everywhere in the atmosphere, to be found even in the dust that accumulates on the end of the finger, and which if they come in contact with the surface of a wound, are one of the chief causes that excite to suppuration. The carbolic acid kills these germs, so that if the surface of the wound is covered with this acid, diluted with water or oil, or mixed in a plaster, so as to completely exclude the air, there ought to be little or no suppuration. That there is great advantage to be obtained from the use of carbolic acid in this way, and in preventing suppuration after compound fractures, I have no manner of doubt, and Prof. Lister showed me many cases where, after serious operations, there had been no suppuration whatever, or but very little. Indeed, in a little work

by the late Prof. John K. Mitchell, of Jefferson Medical College, you will find a sort of outline of these same doctrines in his cryptogamous theory of the production of disease from atmospheric germs. The cool and fine climate of Scotland, and the airiness of their hospital wards in general, must have much to do in the healing of wounds without suppuration. It is no uncommon thing either in this city, as many of us can attest. In Aberdeen, Prof. Pirrie showed me cases where there had been similar good results without the use of carbolic acid, which he attributed to the use of acupression and their bracing climate. And among the cases he showed me were amputations of the breast, leg, and upper jaw.

Note.—This admirable paper is an extract from a lecture delivered by Prof. Pancoast to his class.—E. S. G.

Art. II.—Observations upon the Pathology and Therapeutics of Rabies in the Human Subject. Translated from the Jan. No., 1870, of Memorabilien, by Dr. T. C. Henry. By Frederick Betz.

On the 3d of May, 1869, in the morning, at about 10 o'clock, a young man, seventeen years of age, F. B., was bitten by a dog, which latter, some days subsequently, was found to be rabid, and killed. About half-past 5, of the same day, I arrived at the residence of the patient, and found his injury as follows:

On the back of the right hand, and between the tips of the second and third metacarpal bones, was apparent a large brownish scar, somewhat circular in form. This was surrounded by a whitish circle, say three-fourths of an inch wide, with an elevated border, appearing, I should say, like the patches present in urticaria. Beyond this circle, the skin was normal in color and thickness. Moreover, there were no evidences evinced of pain or unnatural appearances. Although between the period of the reception of the bite and my arrival, some seven hours had passed, time enough, one would think, and more, for the absorption of the poison of the bite, no present apparent result was yet evident, until

I touched the wounded spot with my caustic carrier (or porte-caustique), when there was instantaneously manifested an extension and enlargement of the scar to the limit of the white edges; the bruised wound became larger as the scar showed, or was more clearly defined. I now incised the apparently healthful parts in the vicinity of the scar, and there was at once manifested an amount of suggillation, almost as extensive as if it were a new wound. This hurt would appear to be more serious in extent as one would infer. I applied caustic potash to the surface of the wound (all of a scruple was used), and over all applied a piece of hog's bladder, over that a cold compress, and prolonged this over the entire forearm. With a view of lessening the pain, I injected, hypodermically, about one-third of a grain of morphia. A copious spirt of blood followed the piercing of the skin, which was a sure indication of feeding of the veins—*i. e.*, rapid absorption of the poison.

On the 4th of May, complains of no pain; repeat injection of morphia. Skin moist, diaphoresis.

May 5. Found elbow joint and axillary glands swollen. The caustic wound became almost the dimensions of a half-florin. Injection of morphia.

May 6. Pain in the whole arm; as yet little suppuration noticeable. Injection of morphia.

May 7. Patient had yesterday some belly-ache and diarrhea; to-day, no pain, no thirst, sleep good, pulse 80–85 beats. The caustic crust began to loosen about the sides. Morphia injection.

May 8. The wound more highly inflamed; the loosening of the cauterized scar gave no more diffused appearance; head pained him all over; the tongue thin, having a shape like the commencement of typhoid fever, scooped, no thirst; pulse 60–70 beats, oppressed, retarded. Morphia injection.

May 9. Yesterday vomiting, frequent hallucinations; thirst; swallowed without any trouble; no pain; pulse 60; felt himself better. Morphia injection.

May 11. No pain; general well-feeling condition; the scab more loosened. Injection of morphia, from the effects of which the patient daily experienced a profuse perspiration and a sound sleep.

May 13. The wound exhibited large granulating surfaces. The tendon of the extensor communis digitorum being exposed, the scab not yet altogether come off. No pain; also, besides, no exhibition of disease.

May 17. The wound is in a fair suppurating stage; the patient eats and drinks, as in good health, and goes out. The wound has been covered with granulation for as much as five days.

I saw the patient no more until the 14th of June. On that day the wound was not yet healed. It had remained about eight days nearly on an average the same; the suppuration had ceased, had become dry; the hand and arm were weakly and destitute of power—the whole arm, in fact, very painful; the feeling of the wound, painful; every jar of the body, by movements made, caused pain in the patient's arm; stinging in the ends of the fingers. All the fingers were sensitive; burning in the soles of the feet, worse than after two days of exposure to frost; tongue red, with an alkaline reaction; pulse 90; patient giving off such a penetrating and disgusting perspiration that no one could endure being near him; headache. These symptoms made on me a very doubtful impression; then, there was no doubt that I had to deal with a harbinger of rabies. I concluded to attempt to calm locally, and to induce diaphoresis along with an effort to thin the blood by the aid of acidulated water. I prescribed one ounce of tr. opii with it, had a small saturated compress placed upon the wound, rubbing hourly the entire arm with the tincture of opium, and, at night, 15 drops of tinct. opii to be taken. Besides I ordered 2 drachms of acid. muriat. dil., every two hours 10 drops in one pint of water.

June 15. The patient had taken nearly 8 pints of water with 1½ drachms acid; evidently perspired very much, and passed much urine, etc.; felt his arm easier, the head freer; the all-pervading exhaled odor had filled the whole room; I allowed him to continue treatment.

June 17. Patient tremulous; a swoon occurred, and vomiting, besides the tongue had yet the furred condition, but was somewhat red; the pain indurable. Continue therapy.

June 18. Vomiting; tongue appeared depressed; belly-ache at night, pain in joints, much lassitude. Now, I ordered peppermint-tea to be drank in great quantity, and, at night, 15 drops tinct. opii, to be taken regularly every four hours.

June 20. Since the 14th of June, odor continuing disgusting, the whole room filled with the steaming odor from the patient; one could observe about the same condition of system otherwise.

This lasted about eight days.

June 21. Lassitude, pain in the limbs; during nights specially in the joints; belly ache, thirst; pulse febrile 105, no headache; the tongue moist, not more trough-shaped, but even contracted. The neighborhood of the wound yet bluish red; the impression not very painful, besides the back of the middle-finger, somewhat. No more diarrhea. To provide against the still-continuing erythema, I ordered mercury subl., about grs. 2, and tinct. opii s. unguent pp. aa ung. ½, to be rubbed every three hours into the hand and forearm; tinct. aconite unc. 1, mercury subl. c. gr. 1, every three hours 10 drops. (Fuchs would have ordered sublimate hg. batts.)

On the 2d of July, the patient could be considered as convalescent, then he experienced neither uneasiness nor pain in his joints, nor were there other suspicious symptoms present. The wound gave out again healthful discharge of pus.

On the 5th of July, also, nine weeks from the period of the reception of the injury, he commenced again his occupation of a stone-hewer, and has remained since healthful (January 25, 1870). The injury left behind a very thick radiated appearance, but an apparently good scar.

This case afforded me a favorable occasion for many a reflection, besides occupying me in the five weeks, representing variations which had all the similarity presented that the onset of rabies often denotes. The wound tardy in healing the secretion of pus, alluded to its dryness. I saw a bluish a pect in it, the nerves connected with the wound round about were very sensitive, a typhoid condition associated with it. The interesting appearances were to me, most especially the all-pervading loathness, too appreciable by the olfactory senses, of the transpiration of the skin. As I observed myself surely a similar odor, it seems to that of a dog, which I saw myself as an accompaniment on several occasions. It is, therefore, my firm conviction that were the therapeutics so certainly depicted in this case, that the case must be determined to be an undoubted one of lyssa or rabies. I consider from that circumstance that the case was one in the disease known as lyssa, that the conditions were such that the irritation of the nerves being brought about, was, fortunately, successfully combated, and otherwise the pernicious matter brought out of the body through the skin, and poison modified by the caustic.

This stuff can be looked upon only as organized most assuredly as sebacic acid which produces deleterious action only in the human organism. Astonishing is it to me surely that this offensive transpiration of the skin has, at no time till now, been alluded to. Most assuredly, it should be placed foremost in such diseases, as are produced, and looked for. The allusion to this observation would be very proper in the case of those authors, in furtherance of a knowledge of perspiration or transudation similar to the kind alluded to above, as the first indication of the nature of a blood poisoning or sebacic acid poisoning of the onset of lyssa.

The prominent French physician, Buisson, detects the preliminary signs of canine rabies, and orders a steam bath, and alone requires the same used in it, and, in short, heals in this way. No doubt, this evidence is to the purpose, then we know that the physicians are careful as other people are, and for that reason, also, the imagination tends always. Again, it is essential by the most efficacious efforts in the least trace or suspicion of rabies to operate on the skin in the most feasible way; for then we need not entertain a doubt that the disease is located in the nerves of the skin alone, possessing a condition of intense reflex excitability. The transpiration is rendered impossible by it, as the matter in the blood is withheld, and the poison communicated. In some cases of Moesner's (Wiatt Corresp. B. L. 1834), collected cases of rabies, one is only mentioned as being cured.

Our object, then, should be to make use of the readiest measures by the employment of hot water to the riddance of the perspiration. This trouble is scarcely necessary when deglutition is impossible; also, in mild attacks from the commencement of the disease, warm or hot drinks are as readily swallowed in this disease as cold. One must, beside, take care not to hand a glittering vessel containing the water, or one must keep closed the eyes of the patient. Often fluids by their ingestion under the diseases lighter or less severe, drawn through a straw, milk easier than water. But to force down the fluid is to cause spasms to occur more readily. I have ordered my patients to drink water strongly acidulated with chlorohydric acid. The amount of acid and water the patients consumed was considerable. Whether this was of advantage or rational, the organic chemistry process in blood poisoned in a case of lyssa is not asserted. I gave it in a case of pyæmia under treatment, then we have in the case of poisoning by rabies with two contrary factors

conflicting first in case of disease of the nerves (Toxoneurose, Romberg), and two with disease of the blood. The first is to consider as a primary affection, and last, a secondary process.

I have now recommended the diaphoretic treatment, a full supply of water, a treatment both diluent and diuretic, and the calming of the system, is equally important. In rabies the sensorial system is first of all affected (physiological), finally the motor nerve. Then is this succession of results not always in a similar way for the reason that the shape is not the same. The diseased condition shows the acuteness of the perceptivity of the nerves of the skin, which must become obtuse whereby the reflex excitement is retarded. It is this principal tendency which interferes with the early treatment of the onset of rabies. Opium, morphine, atropine, curare, given subcutaneously or by the mouth, chloroform inhalations find the most frequent use; trouble is not aimed at in not healing cases but a little, on account of the customary full blood letting, for that, one must be on his guard. It is as plain an error when one in the case of lyssa so often and so evidently experiments, as when one stands irresolute and inactive, being, of course, a case of rabies as usually a deadly disease. That the most of the cases of lyssa die, depends upon a most rapid treatment, with all, in a furious treatment in which the disease is beset by an artificial death.

I have attained propitious results which one experiences in a more recent period in traumatic tetanus and rheumatism. Since one has treated it with more judgment and less violent measures. An experience well deserved has been acquired also in relation to the disease of lyssa. It is an old practice in the case of tetanus to use baths, sometimes with medicinal additions, as caustic lime, added for the purpose of arousing the entire nervous system; where these measures can be adopted it would appear to apply to the disease of rabies; the same by means of the diaphoretic treatment would be of service on the other side, acting so as to calm the tetanically affected entire nervous system.

To what now concerns the local treament must all attention be bestowed. Trouble attends on some of these cases to a great extent, in others very little. By means of local treatment, one gets at the principle upon which to act in ridding the human body from the poison destroying. No one has ever seen the poison, and one should consider it as

an hypothesis when, not as yet, any case has come to light, that through the discovery of the broken skin the poison of a mad dog has yet been ascertained to have taken place. Otherwise, let the occasion of the accident, the bruise, the inflammation, the injury to the nerves and their mark, be ascertained first.

For the baneful influence of the poison exerted by rabies, caustic potash alone is entitled to the highest consideration; various other measures have at one time and another been tried. Still the employment of caustic potash is not everywhere feasible and required as a preliminary condition. I have previously stated that symptoms may be altogether insignificant, apparently, and below it, lesions of continuity, crushing the nerves, and retardation of the flow of blood, not visible to the eye. Such a condition must be considered before using caustic alkali, and therefore the operation of the poison would be caused over a greater extent of surface. Will one be so hardy as to persist in his purpose under such conditions? for the wound caused by the bite would be then the least shut off from the healthy tissue. The gap caused by the bite and the caustic, lastly, are altogether inadequate to use diffusedly. If one, with a cauterizing solution of caustic alkali, half ounce, with a pencil (or brush), should cauterize (the pencil should be well saturated), and the application could be defined or limited, the operation in this mode facilitated, the caustic applied at the same time more deeply; all other kinds are far less efficient. Cauterizing is advantageous in other respects; precision of action is one, for no one is sure of the recovery of such kinds of disease in spite of every effort. The cauterization must succeed and be associated with milder measures. It is altogether absurd, that, through the agency of emetic, with cantharides, and such like, irritating stuff can be removed, suppuration brought forth with the intention of eliminating the virus. This can only destroy or decompose, but never through the eliminated matter. It is surely so much increased, that through the persevering administration of emetics, the wound damages from the profusion of discharge. Besides it gives way to the practice when in the outbreak of lyssa; in it, the first prodromes, the most disregarded are calmness; the wound, irritable, becoming dry, is at a stand in the process of healing; it fails in all modes of giving out healthy or laudable pus. Further, the treatment, however skillfull, is baffled by such a condition in this disease. An important clinical

advantage possesses besides the production of artificial ulcers in these cases; because, often in the first place the breaking out of lyssa by means of the recognized appearances signalize, and the physician by means of this mode of acting can hit in time. A daily control over the wound, as generally found, is therefore for months the task of the physician, by which physical changes deserve all attention as gastro-intestinal disturbances which also appertain to the prodromes of rabies. Then the physician operates in a very much more effective sphere; a fortunate turn of his therapy leaves him much more yet to hope, when as yet the disease has not as yet reached its highest point. The prodromes of lyssa must surely be studied as symptoms since it is so important. *Obsta principiis.—Cincinnati Lancet and Observer.*

ART. III.—RESULTS OF THE INJECTION OF PARASITIC SPORES INTO THE BLOOD OF ANIMALS. By A. H. NICHOLS, M. D., Boston.

The interesting discoveries of Hellier, Zurn, Chanveau, and Davine, that there is contained in the blood, in several contagious diseases, numerous parasitic growths, known as micrococcus, mycothrix, leptothrix, etc., has stimulated further investigations in this comparatively new field, among the more recent of which are those of E. Semmer, Prosector at the Veterinary Institute at Dorpart, reported at length in *Virchow's Archiv* for April 16, 1870. His experiments consisted, first, in the repeated examinations of blood of animals which had died of contagious diseases, with the view of detecting therein any parasitic growths, and his results may be briefly summed up as follows:

In cases of glanders, micrococcus cells and bacteridiæ are found in the blood, lymph and pus of animals which have died of this disease.

In charbon (malignant vesicle) and septicæmia, the blood is found to contain numerous micrococcus cells, and the bacteridiæ (micothrix and leptothrix), both in the form of simple filaments and also arranged together so as to form a chain, the latter growths having been long known under different names.

That these infusoria, having the form of slender cylindrical filaments, really are parasitic growths, was proved in the case of five pigs, which had died of septicæmia.

In the blood of these animals the actual growth of the filaments from the micrococcus cells was demonstrated under the microscope. The bacteridiæ seen in the cases of charbon are for the most part shorter, more selender, and have a less distinct outline, than those found in septicæmia, where they vary in length, and consist of a single well-defined filament, and are at the same time less numerous than in the former disease.

These filaments, however, are not always of the same form, even in charbon, for here, also, variations are noticed, so that at times the parasitic growths in this disease, resemble, both in form and size, those found in septicæmia.

These parasites, moreover, are found in other diseases characterized by blood poisoning, and even in the blood of some healthy animals a few micrococcus cells (penicellium glaucum) have been found, and in other cases both leptothrix and micrococcus (bacteridiæ) have been seen in the liver and intestines.

In order, next, to determine whether the contagious diseases above referred to are really caused by the parasites found in the blood, the author has tried a series of experiments, with the following results:

Penicellium spores, of the size of a red-blood corpuscle, were mixed with distilled water, and then injected, by means of a small subcutaneous syringe, into the jugular veins of two colts. The animals remained perfectly well, however, after the injection.

Several weeks later, micrococcus cells were injected into the same animals, and here again the injections were not followed by any symptoms of disease.

Injections of anthrococcus cells were likewise followed by negative results.

A second series of injections was next made with large masses of the spores of penicellium glaucum. In these cases slight feverish symptoms were created, which soon disappeared, however, and upon an examination of the animals after they had been killed, all the organs and textures of the body were found to be quite normal.

The author next injected bacteridiæ from the blood of an animal infected with charbon, using in this instance a bottle with a glass tube attached, as recommended by Hallier.

The spores of this parasite were put into distilled water,

and a few drops of this mixture were then forced into the jugular vein of a colt. At the end of five days the animal remained, to all appearances, quite well.

Five days after the first injection, two ounces of the same fluid, containing bacteridiæ and micrococcus cells, were thrown into the jugular vein of the same animal, by means of a large syringe armed with a small needle-like canula. This was followed by symptoms of fever, without loss of appetite, and the animal appeared soon to recover. On the tenth day after the inoculation, however, fever again set in, the appetite failed, the animal exhibited an unsteady gait, and died during the night.

The following was the result of the autopsy:

In the neck, around those spots where incisions had been made for the purpose of injections, the connective tissue was thickened and infiltrated with serum, exhibiting here and there ecchymosed patches. The jugular vein was filled with a dark-colored blood of the consistence of tar, but otherwise not changed. Lower down on the neck, there was well-marked serous infiltration in parts remote from the point of injection.

On the left shoulder there was extensive extravasation of blood beneath the superficial integument, involving the connective tissue, and extending down beneath the muscles. In the abdominal and thoracic cavities and pericardium slight serous exudation. Numerous ecchymosed patches in the peritoneum, intestines, pleuræ, heart, and lungs. Spleen enlarged, friable and gorged with blood. Liver of a yellowish-brown color, and the microscope showed beginning fatty degeneration in this organ. Kidneys studded with large, yellow, hardened masses; and congested white, fatty degeneration of the epithelial cells of the uriniferous tubules communicated a yellowish gray color to these entire organs. Lymphatic glands enlarged, softened, and several were of a brownish-red color, caused by extravasation of blood. Brain and spinal cord infiltrated with serum, while the minute blood vessels were distended with blood. Ventricles filled with a clear, colorless liquid. The blood was everywhere of a dark-brown color, of the consistence of tar, and contained large numbers of parasitic growths characteristic of charbon.

Here, then, charbon was produced in a colt by the injection of parasites taken from the blood of animals affected with that disease. In this instance the symptoms broke out on the ninth day after the injection, death occurring on the tenth day.—*Boston Medical and Surgical Journal.*

ART. IV.—DOES THE PHYSIOLOGICAL LIVER OF THE LIVING ANIMALS CONTAIN OR PRODUCE SUGAR. Criticism upon Dr. AUSTIN FLINT'S, Jr., Experiments. By Dr. F. W. PAVY. England.

Dear Sir: I notice, in your January issue, a communication from Dr. Austin Flint, Jr., entitled "Experiments undertaken for the Purpose of Reconciling some of the Discordant Observations upon the Glycogenic Function of the Liver." Permit me, through you, to make a suggestion to Dr. Flint regarding a portion of the experimental evidence upon which he has relied.

It is toward reconciling Bernard's views and my own, that Dr. Flint's communication is directed. As regards the state of the liver, his results coincide with those I have obtained. He agrees that, during life, the liver is devoid of sugar, but considers, nevertheless, that the liver is a sugar-forming organ, and that sugar is discharged from it into the circulatory system. He expresses himself thus in the concluding paragraph of his communication: "During life, the liver contains only the glycogenic matter, and no sugar, because the great mass of blood which is passing through this organ washes out the sugar as fast as it is formed; but after death, or when the circulation is interfered with, the transformation of glycogenic matter into sugar goes on; the sugar is not removed under these conditions, and can then be detected in the substance of the liver."

Now, looking at the experimental evidence upon which this conclusion is founded, I have nothing, as it may be imagined, to say against that portion which refers to the liver. According to the details given, a portion of liver during a living state was obtained, and as quickly as possible placed in a condition for arresting any *post-mortem* production of sugar. Upon its being tested, Dr. Flint, in harmony with my own results, failed to obtain any decided evidence of saccharine impregnation.

Thus far, then, it is satisfactory to find that our results coincide. I now come to the point upon which they are at variance, and my object in penning these remarks is, to point out that it is, I consider, upon the method of experimental procedure adopted by Dr. Flint that this variance depends.

Notwithstanding Dr. Flint's experiments yielded him specimens of liver free from sugar, yet he speaks of the

blood derived from the liver as having been found to be charged with sugar. In obtaining this result, I observe that the blood was not collected from the hepatic veins until after the preliminary operation for procuring a specimen of liver had been conducted. According to the details given, the following is the process that was adopted: "Immediately after cutting off a portion of the liver, and throwing it into boiling water, the medulla oblongata was broken up; a ligature was applied to the ascending vena cava just above the renal veins; the chest was opened, and a ligature applied to the vena cava just above the opening of the hepatic veins. A specimen of blood was then taken from the hepatic veins."

Now, so quickly is sugar formed in the liver after death, that, after the above method of procedure, I should look for the result that was obtained by Dr. Flint. To procure a representation of the natural state of the blood, as much promptitude is called for in its collection after death as in the case of the liver. Dr. Flint's experiment consisted of two distinct portions, that referring to the liver, and that referring to the blood. If the steps of it had been reversed, and the animal devoted in the first instance to the collection of blood, I think he would have found sugar in the liver, and absent, or nearly absent, in the blood. There is necessarily an expenditure of time involved in placing ligatures upon the veins, as was done by Dr. Flint before collecting the blood. By means of a cathetar, blood may be collected from the inferior cava, at the seat of entrance of the hepatic veins, during life; and, when so collected under a state of tranquility on the part of the animal, it has been found by myself, as well as by others, to present only the same traceable indication of the presence of sugar that is met with in the other parts of the circulatory system.

Sugar, being discharged into the circulation through the hepatic veins, would be at once conveyed to and give a saccharine character to the contents of the right side of the heart, and it was formerly stated that the blood of the right side of the heart in reality presented a saccharine behavior which did not belong to that of the left, the conclusion being founded upon the evidence furnished by the *post-mortem* state. Now, there is no difficulty in experimenting so as to secure a specimen of blood being obtained from the right side of the heart after death, in what may be regarded its natural state. If, for instance, instantly after the destruction of life

by pitting, the chest be opened, and the heart seized, and a ligature placed around its base, the blood that is detained in its cavities will present the condition belonging to life. In operating in this way, and comparing the blood removed from the right cavities of the organ with a specimen procured from the portal vein, and also some collected previously from the carotid artery during life, I have been unable to discover any appreciable difference of behavior between them. Such, however, is very far from being the case; if only a short time is allowed to elapse after death, before the blood is imprisoned in the heart for collection, on account of the rapidity with which the *post-mortem* production of sugar in the liver takes place, it requires but a very short time for the contents of the circulatory system between the liver and lungs to acquire a marked saccharine character. It must be remembered that, in the destruction of life by pitting, the cause of death is stoppage of the respiration. The circulation continues for a little while after the destruction of the medulla oblongata has been effected, and thus the sugar found is carried onward from the liver.

I would ask Dr. Flint to alter his mode of experimenting, so as to make it conform to what I conceive to be required to avoid exposure to fallacy, and I think his results will then tally with my own in the case of the blood, as they have done in that of the liver.—*N. Y. Med. Jour.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—ANALYSIS OF VARIOUS ARTICLES. Published in the Medical Times and Gazette, the British Medical Journal and the London Lancet, etc. (Original copies.) By Prof. JAS. M. HOLLOWAY, M. D.

Treatment of Enlarged Lymphatic Glands. Mr. Furneaux Jordan, in a paper before the *British Medical Journal*, proposes a new method of counter-irritation for the cure of this

troublesome affection, which, he asserts, has never been known to fail even after other plans of treatment have been unavailing. He regards the ordinary enlargement of lymphatic glands as due to inflammatory action. This enlargement can be made to disappear by counter-irritation, if only the *proper locality* is selected. For instance, when the cervical glands are enlarged, the counter-irritant should not be made over them, but to parts adjacent. A large patch of iodine irritation should be applied to the back of the neck and extended downward between the shoulders. At intervals, during the day, while the patient is recumbent, a bag of shot of proper size should be placed over the glands, and allowed to remain for a considerable length of time. One advantage of counter-irritation is this, it gives certain and immediate relief to pain.

On the Treatment of Hæmorrhoids by Taxis. Mr. McLean, before the same society, read a paper on the subject named above, in which he adopted the views of Erichsen, in regard to the pathology of hæmorrhoids. All kinds of piles are composed of a sac or cells with fluid contents; so long as this fluid remains, suffering persists. Generally, piles are neglected by the sufferer until the disease has assumed a stage when the ordinary remedies are useless, and when they are seen by the surgeon, active procedure is required. He recommends "an obvious, though hitherto unknown, treatment," which consists in emptying the sac or cells of their contents by taxis. [This method has been in common use by American surgeons for many years. H.]

He suggests the following plan, as the best for accomplishing the *taxis*. When the tumors are external, steam fomentation should be employed until the tumors are softened and the irritation lessened. Then taking a piece of soft, well-oiled cloth, one of the tumors should be enveloped by it, and with two fingers and a thumb, the fundus should be gently and steadily grasped. With a kneading movement the tumor should be pressed toward the mouth of the

sac; gradually the swelling will become smaller, until finally the sac will be emptied and the surrounding œdema relieved. In the beginning, there will be some pain, but in a short time, as the sac becomes placid, the pain will cease.

When the piles are internal, an enama of warm water should be given, and the patient directed to discharge it as upon going to stool. This effort will cause the tumors to protrude, when they can be treated by taxis as described above. After this has been accomplished, attention to the condition of the bowels and the use of astringent lotions, ointments, and injections is indicated.

Scarlet Fever with Special Reference to Pathology and Treatment. The following summary of a paper on the above subject, read before the same association, by Dr. R. Renfrew, of Glasgow, is given without abridgment, as it presents briefly the pathology and treatment adopted by very many medical men throughout America, not alone in the treatment of scarlatina, but also of other zymotic diseases:

Scarlet fever is one of the zymotic diseases. The zymotic diseases are produced by an organized substance entering the body, which has the power of multiplying itself. In multiplying itself the blood is disordered, the nervous system deranged, the circulation quickened, and the secretions and excretions are changed. The poisons of the zymotic disease are not thrown off by the usual eliminating organs, but each poison is eliminated by a particular part of the body—small-pox by the skin, cow-pox at the point of introduction, enteric fever by the lower part of the ileum, scarlet fever by the fauces and nose. When the poisons are thrown off there is always irritation and inflammation. As the poison of scarlet fever is thrown off by the fauces and nose, a large portion must pass into the stomach to be reabsorbed, intensifying and prolonging the disease. The remedies given in scarlet fever should be those that will destroy the poison, moderate, and assist physiological changes. To accomplish these ends a mixture of chlorate of potash and tincture of steel is given, which contains chlorine, muriatic acid, iron, and chlorate of potash. The chlorine destroys

the poison; the acid supplies acid to the blood, which is in a subacid condition; the iron improves the red discs, which are in a black and melanosed condition; the chlorate of potash supplies oxygen, to assist in oxidizing the disintegrated material that is floating in the blood.

Pressure to the Uterus in Case of Lingering Labor.—Dr. W. S. Playfair, of King's College Hospital, gives the history of a case in which he employed successfully Von Ritgen's method of external pressure, in a case of powerless labor. After the discharge of a large quantity of liquor amnii, the head was found at the brim of the pelvis in the first position. The pains had ceased almost entirely, although ergot had been freely given. The husband objected to the use of the forceps, and before insisting upon their employment, the doctor concluded that he would try external pressure. Both hands were spread over the uterus, and firm and steady pressure was made downward, at intervals of five or ten minutes:

"The effect was more favorable than I anticipated; with each application of the pressure the head was felt to descend, and in about three-quarters of an hour it was distending the perineum. Now, for the first time, some slight contraction was felt, and the head was soon expelled. Such a procedure is indicated when the head is in the right position; the pelvis is roomy, and the delivery retarded by deficiency or absence of uterine contraction."

CLINICAL LECTURES.

"Ex principiis nascitur probabilitas: ex factis, vero veritas."

LESSONS FROM THE MEDICAL CLINIC AT THE "HOSPITAL DE LA CHARITE," GIVEN BY S. JACCOUD, Assistant Professor to the Faculty of Medicine at Paris, Physician to the Hospital

St. Louis; Chevalier of the Legion of Honor; Corresponding member of the Royal Academy of Science of Lisbon, and of the Medical Societies of Berlin, Vienna, Würzburg, etc. Containing 29 Wood-cuts and 11 Chromolithographs.

[Translated by Dr. J. D. JACKSON, of Danville, Ky.]

Icterus—Sclerosis and Amyloid Degeneration of the Liver.
History of a Case of Chronic Icterus—Diagnosis of Displacement and Augmentation in Volume of the Liver—Cysts on the Convex Surface—Tumors on the Inferior Surface.
Diagnosis of Intra-hepatic Tumors, and Hypertrophy of the Liver—Hydaatid Cysts—Multilocular Echinococci—Adenoid Tumor of the Liver—Characteristic Signs of Cancer of the Liver.
Amyloid Degeneration—Its Characteristics—Sclerosis of the Connective Tissue, or Interstitial Hepatitis—Its Symptoms—Its Connection with Common Cirrhosis—Results of Autopsy.

Gentlemen: It is again a case of icterus to which I would attract your attention to-day. I am not ignorant of the fact that a diversity of subjects is one of the grand attractions, and one of the essential conditions of clinical teaching; but the cultivation of variety ought not to be carried to the sacrifice or ignoring of the advantages which result from the putting together and comparison of facts. Seized with a mild and transitory icterus, the patient with whom we were concerned in our last conference furnished us the opportunity of studying the most common forms of acute icterus; affected with a chronic icterus already of six months' duration, the woman of Saint Anne's Ward, No. 2, will permit me to expose and discuss the differential diagnosis of the principal lesions which can bring about a persistent icterus. I will tell you in advance that we have to do with a rare and obscure case, and that the difficulties in it are such that they should give absolution to my diagnosis in advance, if it should prove erroneous.

The patient, aged thirty-six years, is of a robust constitution; she has always had excellent health, and a considerable degree of embonpoint; although for some months she has fallen off, she still presents to us a very marked development of the adipose tissue. As to her occupation, this woman has for years been a worker in dust; she has cleaned the skins destined to be used in the fabrication of hats; I will add that she has never been charged with other than the mechanical part of this work; she has brushed, picked, and shaken, but has never been employed in the chemical operations of this industry. She has given us very circumstantial details regarding the customary health and the death of her parents, but this information has no special signification with reference to the disease with which she is affected. Follow me well, I pray, in the mode of origin, and the sequence of the phenomena; here, no detail is useless.

It is fifteen months since this woman commenced to suffer pains, which, in the meanwhile, always occupied the pit of the stomach and the right hypochondrium; these pains did not burst forth suddenly in all their violence; they developed themselves slowly, gaining little by little in intensity, and it was not until the end of two or three days that they were so severe as to oblige the patient to lie abed. This period continued for two, three, or five days, at the farthest, after which the pain gradually diminished, to disappear at the end of thirty-six or forty-eight hours, without leaving any trace of its passage other than an unpleasant feeling of weight in the right side of the belly, and this sensation furthermore was temporary. This species of attack, which is so clearly characterized by the mildness of ascent and decline, continued thus for from five to eight days, after which the woman found herself very well, and resumed her occupation. The frequency of these pains has been very variable; in the beginning, they returned nearly every month; a little later, they became more frequent, while losing their duration; during a period of about four months she had

them in this way every fortnight, and even every week; then there came a lull, and for six weeks at least she had no new attacks. I can guarantee the exactitude of these details; they are not drawn entirely from the sensations of the woman; observing her, as I have done for many months, I have many times seen what she calls her crises, and it is after what I have seen that I describe them. I have, in the meantime, observed two other phenomena, one constant, the other variable; frequently, the onset of the pains has been accompanied with an intense febrile movement, during which the thermometer showed 39°, 5 or 39°, 8 (cent), and the pulse 110 to 120; this fever never remained so long as the pain itself, but whenever it manifested itself the attack was more violent and longer; under other circumstances, the painful access was completely apyrectic: this is the variable phenomenon to which I made allusion a moment ago. As for the constant phenomenon, it is of more importance; during each of these attacks the liver increased in volume, the pain passing away as it assuaged, but this retraction did not always bring it back to its primitive dimensions; and in judging the question by the level of the lower border, it was easy to assure one's self, especially after great accessions of fever, that the organ was markedly lowered for some lines or more. Another interesting modification took place during the attack; the jaundice, which had declared itself in the fifth month of the disease, augmented each month in intensity; it became, during the painful periods, of a deep greenish yellow; this change of shade was always manifest after twelve hours of suffering, and never survived the fit.

Some weeks after the appearance of these paroxysms, but rather before the icterus, other symptoms came up in connection with the digestive organs; these were at first alternations of constipation and diarrhœa, not explainable by any change in diet, then a considerable increase of appetite, which always persisted. This boulimia was extremely marked from the beginning; the ordinary ration of bread for two days scarcely sufficed for one, and the woman was

obliged to get up once or twice in the night to eat. This extraordinary consumption of food scarcely profited her, since it was from this date that she commenced falling off. Things went thus for three months; at the commencement of the fourth, a new phenomenon appeared, a symptom of note, to which I call your especial attention: this was an epistaxis, though not very extensive, which returned once or twice per week; it has not ceased since then, and you have the now frequent opportunities of observing it for yourselves. Toward the end of the fifth month, after a paroxysm of pain, which appeared to have been remarkably violent, the jaundice appeared; it has never since disappeared, but it has offered numerous oscillations in the intensity of its shadings. A little later, the woman, preserving all her impulses, and all her good humor, but incapable of working, and markedly enfeebled, entered the hospital, where I have observed her for some months.

After this exposition of the preceding history of the disease, a few words will suffice to reveal to you the actual state now. There has been no access of suffering now for six weeks, but this is the only change of note; the boulimia remains unchanged, and the emaciation makes slow but constant progress; as in the past the constipation alternates with the diarrhœa; sometimes the fecal matters have their normal color, and sometimes they offer the ashen gray tint, which denotes the absence of bile in the intestines; the urine is very strongly charged with biliary coloring matter; it contains neither sugar nor albumen; the jaundice is very deep, and of a greenish yellow, and slightly earthy tinge; there is, from time to time, a slight epistaxis, and the bleeding of the nose is sometimes replaced by a bloody expectoration, a true hæmoptysis. Finally, despite the long duration of the malady, and the emaciation which has succeeded it, this woman has not got a cachectic appearance; she keeps up well and aids the hospital attendants in their ward duties, and her natural gaiety remains unaltered.

In possession of this circumstantial information we can

proceed to the examination of the liver and the spleen, upon which we ought to concentrate all our attention.

The hepatic region presents no fissure, but by palpation it is easily perceived that the liver extends beyond the false ribs; it is especially at the level of the median line that this prominence is most pronounced, and at this point, thanks to a process of exploration which I would recommend you to practice yourselves, we can acquire positive ideas of the physical state of the organ. The abdominal walls in this woman are exceedingly flabby and soft; on placing the four last fingers of the hand by their dorsal surfaces on a level with the inferior border of the liver, and pressing gently the wall from front to rear, we succeed without trouble in carrying the four fingers from below above, up to the inferior face of the organ; if, then, we apply the thumb of the same hand to the superior face, we intercept between the two branches of this intelligent pair of forceps a segment of the liver, which is only separated by a very thin layer of parts, and the physical conditions of which one can appreciate rigorously. This exploration, which I have often repeated, has always given the same results; the free border of the liver, hard, and clearly cut, presents itself, under the form of a well-defined edge, salient in front, with the entire segment accessible by this mode of palpation, remarkably indurated; it is a wooden-like resistance beneath the fingers which is experienced; the tissue does not recede, it does not give way one millimetre beneath very firm pressure, and it is in vain that we endeavor to approach the fingers and thumb at the expense of the tissues interposed. This induration is perfectly uniform; we find it with the same characteristics along the entire length of the inferior border of the organ; there are neither undulations nor inequalities of any sort.

Percussion shows a very considerable augmentation of the volume of the hepatic glandular structure, but this great increase previously shown by the palpation, is especially marked on a level with the median line.

The simple application of the hand over the left hypochondrium establishes the presence of a tumor, which extends much beyond the ribs, and advances obliquely below and in front toward the anterior abdominal region; this tumor is formed by the spleen, shown to be of considerable dimensions, to-wit: 15 centimetres in the vertical line, and 16 in the antero posterior line. The belly has an unusual development, and this circumstance, in an individual bearing an enlarged liver and spleen, causes us to think of ascites; however, there is none present. This woman has an habitual meteorism, which increases during the periods of diarrhœa; furthermore, after lying down, there is induced an extreme flaccidity of the abdominal wall, in consequence of which, it falls back and spreads out on each side; such are the real causes of the abnormal aspect of the belly, but about the liquid there can be no question, there is not a trace of it; this is not one of those cases in which there can even be doubts, for there is certainly no dropsy. Do not forget this negative symptom, we will revert to it more than once in the diagnostic discussion which will follow. The inferior members are the seat of varicose ulcers, and you have there an example of this relation already pointed out by Aretæus, between disease of the liver and certain rebellious ulcers.

Resuming the different developments of this long inquiry, and we arrive at this conclusion: A chronic disease of the hepatic apparatus, with persistent icterus, with a tumor of the spleen, without ascites, and without albuminuria.

What the chronic disease is, is what is less easy to determine. A previous question besides remains to be disposed of.

When the liver evidently extends beyond the ribs, and even when the projection occupies the whole length of the inferior border, you ought not to conclude, gentlemen, from this single fact, that the organ is augmented in volume; this projection simply proves that the liver is not in its ordinary place: this displacement can result as well from a simple mechanical letting down of the organ, as well as from a true enlargement, and in all analagous cases, the ulterior

clinical judgment is entirely subordinated to the solution of this first point. For obtaining it, it is necessary to take into consideration the peculiar characteristics of the projection of the liver, and the symptoms presented by the patient. This part of the diagnosis is here remarkably facilitated by the perfect idea we have acquired of the peculiarities of the hepatic tissue.

The displacement by lowering can be produced by tumors contiguous to the liver, but situated beyond it; and these tumors ought to be divided, when under actual consideration, into two varieties, as they occupy the superior or inferior face of the organ. The first are the great cysts of the convex face, which have been well studied by my learned colleague, Dolbeau, in his excellent thesis; they give rise to frequent errors; not only do they depress the liver from above downward, and lowering it, but if ever so slightly in rear of the transverse diameter, they are contiguous to the inferior border of the organ in front, in such a way that there is caused a projection beneath the abdominal wall, the displacement then simulating at all points that which is produced by real augmentation of the organ. But in this case, the portion of the liver which is accessible to palpation offers neither induration nor abnormal resistance; there is neither icterus nor any trouble in the nutrition, and if one takes the pains to figure by a line, the superior limit of the hepatic dullness, he sees that this line presents a convexity, of which the culminating part elevates itself more or less into the thorax, at the expense of the right lung; hesitation in the actual case is not then possible.

Tumors of the inferior face of the liver are generally accessible to palpation, when they are situated in front of the hilus; at the time that one establishes the salient obliquity and regularity formed by the hepatic border, he will find on penetrating more deeply, and from below upward, a mass more or less spherical, and more or less voluminous, which is the true cause of the displacement. In our patient, whose abdominal wall presents the flaccidity you are aware of, this

exploration offers no difficulty; the hand certainly reaches up the level of the hilus, and any suspicious sensation is not perceptible. Besides these tumors are generally hydatid cysts, which do not bring about the disorders in the general health which we have observed. If the cyst was situated altogether toward the hilus, or in rear of it, it might escape direct examination, and because of its seat, bring on a persistent jaundice by compression of the biliary canals; the clinical tableau would then be rather more like that before our eyes: but give attention to the fact, that an hydatid cyst under these conditions, could not produce juandice without, in the meanwhile, determining an ascites, since the compression which is exercised upon the passage-ways for the bile, bears also necessarily upon, the vena porta. It was what took place in that woman, the post mortem specimens in whose case I showed you some days ago; without any perceptible tumor, this patient had icterus and ascites for months, then there came on a persistent albuminuria, to which she succumbed. Now, the liver itself, as you will recall, was sound; it had been pushed downward and forward by an enormous hydatid tumor in process of sebaceous transformation; this mass was situated immediately in rear of the hilus, and compressed the canals and veins; hence, the icterus and ascites; under these conditions it would always be thus; if the tumor does not affect the structure of the hilus, there will be neither icterus nor ascites, but if it acts in such a manner as to produce icterus, ascites necessarily follows. In our patient, we have the icterus, but we do not have the ascites; there can be no question of an extra hepatic tumor situated at the inferior face of the organ, on a level with the hilus. The cause of the displacement resides then in the liver itself; an important conclusion, but which leaves us still in the presence of the same eventuality; one, or many isolated tumors in the liver, can lower it, and cause it to appear larger, without any hypertrophy, properly speaking, existing; this is a new cause of error which we ought not to leave behind us. It is true, that these intra-hepatic

tumors rarely produce a uniform and regular tumefaction, like that which exists in the patient; it is ordinarily under the form of protuberances, and of limited and isolated projections, that they present themselves, but in certain cases, when they are deeply seated, they lose these distinctive characters, and can easily be confounded with an hypertrophy of the parenchyma itself; it is not, then, supererogation on our part to stop a little on this point, the discussion of which will besides permit me to give you some details regarding two species of intra-hepatic productions, which are very little known.

In proceeding by order of decreasing frequency, it is necessary to first take into consideration the hydatid cysts situated in the interior of the liver. But because of the very marked symptoms in the case of our patient, we can pass them rapidly by. These cysts do not induce painful paroxysms, nor digestive troubles, nor emaciation, nor icterus; furthermore, they do not bring about splenic tumors, unless by chance the spleen should itself be the seat of hydatids, a coincidence which has been seen, but which is very rare. Finally, if the cyst is superficial, there may be found a limited projection, which may be circumscribed by palpation, and which sometimes presents the phenomenon known under the name of hydatid quivering. There is then, here, rather a deformity than a displacement or lowering of the liver. You will see that there is no trait in common between this pathological state and that of our patient, so that it is useless to insist upon it.

It is not the same with another, and an infinitely rarer lesion. I speak of multilocular echinococci. In this case, the hydatids, instead of being inclosed in a mother vesicle, develop themselves freely, the one beside the other, in such a way that the production, taken all together, represents a tumor of multiple cells or alveoli; these cavities ordinarily communicate the one with the other by openings of variable dimensions. The basement membrane of these tumors is formed by a thick, fibrous stroma, often infiltrated with fat,

and which sometimes circumscribes portions of the hepatic substance, charged with pigment. The alveoli inclose gelatinous vesicles with stratified and amorphous walls; the little cavities only contain one, the larger two, and sometimes more. These vesicles, which have all the characteristics of echinoccious cysts, and which are susceptible of the same transformations as the membranes of these last, offer in their interior to the naked eye white spots, which the microscope recognizes as crowns, hooks, and calcareous corpuscles; these elements differ in no respect from those we have observed in the ordinary hydatid cysts, but they only exist in the large cysts, the small ones are usually sterile.

According to Virchow, the smallest alveoli have a volume of from 3 to 16 centimetres, the medium attain three and four-tenths; the largest which he observed had a length of 6 millimetres, and a breadth of from 2 to 3. As to the volume of the tumor, when taken all together, it can attain considerable proportions; the central cavity oftentimes the volume of one's fist; he found in one instance one of the size of a man's head, and in a case of Griesinger's, the transverse diameter of this cavity was 30 centimetres, and it contained 8 pints of purulent liquid. It is the rule, indeed, and this is not one of the least characteristics of this morbid production, that the central parts suppurate; the liquid contained in them is puriform, and of a yellow, dirty greenish color, and on letting it set, it gives a yellowish white precipitate, composed of small vesicles and grayish colored membranes, molecular granulations, crystals, and fat. Independently of the main tumor, there are sometimes found small ones, isolated and scattered through the parenchyma of the liver. The effect of these products is to retract the calibre of the biliary canal, the branches of the vena portæ, the hepatic artery, and the sub-hepatic veins; these modifications were very marked in the instance related by Virchow, and in the first case of Griesinger, the principal twig of the right branch of the portal vein was obliterated. Such are the principal anatomical characteristics of multilocular echino-

cocci, which I have borrowed from the excellent work of Frerichs, the reading of which will usefully complement these rather brief observations.

There are only six detailed and precise observations of this singular lesion;* but, in all these instances, the symptoms presented a remarkable similitude, so that without fear, we are able to base upon them a comparative clinical opinion. In all these cases, there had been, as in our patient, a persistent icterus, a tumor of the spleen, and an augmentation of hepatic dullness. Those are the common signs; these now are the notable differences. The principal tumor of the multilocular echinococci always has its seat in the right lobe of the liver, so that by the side of the general tumefaction of the organ, there is found at its level a hard projection, sensible to pressure, of cartilaginous consistence, of a surface sometimes smooth and sometimes nodulated; in passing, note the fact that this tumor, despite the presence of the central suppuration, has only been found to be fluctuating a single time, and that in Griesinger's first case. On the other hand, with the icterus, there has always co-existed a peritoneal effusion, formed sometimes of pure serosity, and sometimes of a purulent serosity. Ascites only failed in the case of Friedreich. Finally, there had never been any painful paroxysms. The differential characteristics are sufficiently precise to permit us to eliminate

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* Buhl, second case. *Illustrirte Muncher Zeitung*, 1852. *Zeitschrift fur ration. Medicin*, 1854.

Luschka and Zeller, *Alveolar colloid der Leber*, *Tubinger*, 1854. Virchow, *Verhandlungen der physik, medic. Gesellschaft in Wursburg*, 1856.

It is Virchow who discovered the true character of these tumors, and pronounced them multilocular echinoccocci. Griesinger, *Archiv der Heilkunde*, 1860.

Frerichs, *Klinik der Leberkrankheiten*. Braunschweig, 1861.

Friedreich, Beitrage zur Pathologic der Leber und Milz (Virchow's Archiv, xxxij, 1865.

Erismann, *Beitrage zur Casuistik der Leberkrankheiten*. Zurich, 1864.

This last memoir, like the preceding one, in the work of Frerichs, contains the relation of a second case of Griesinger, in which the liver was tumefied and remained smooth on palpation.

without reservation, the possibility of echinococci of multiple cells.

A third lesion, rarer still, ought to find a place in this diagnosis, this is, adenoid tumor of the liver. It has been many years since this alteration has been known in an anatomical point of view; it was pointed out by Rokitansky, in 1859,* who described many examples of it. But, in a clinical point of view, science possesses but two observations, that which was published in 1864 by Griesinger,† and that of Friedreich;‡ the microscopical study to which Rindfleisch,‖ and Friedreich have submitted these pathological productions, demonstrated the perfect conformity of it to the tumor of Rokitansky. This alteration consists essentially in a new formation, a hyperplasia of glandular substance like the normal hepatic substance. Sometimes these depots are of small volume, and they are disseminated here and there in the thickness of the organ, under the form of small masses, well limited, and enucleable; in other cases these hyperplasic products are more confluent, and they form a true intra-hepatic tumor. In one of the instances of Rokitansky, the tumor had a diameter of six inches in the other, it showed itself to be of the volume of a pullet's egg. The microscope showed the mass to be formed of cells like those of the liver; Rindfleisch found, besides, in places, cylindrical epithelium, similar to that which lines the biliary canals. In the observation of Griesinger, the liver, as a whole, presented an enormous volume; it was riddled with these hyperplasic tumors of all dimensions; it had thousands, says the author.

I do not wish to let this occasion escape of offering you these interesting and new facts, but the symptoms chronicled

*Rokitansky, *Neber Tumoren bestehend aus Lebertexter neuer Bildung*. Niener Allgemeine Med. Zeitung, 1859.

†Griesinger, *Das Adenoid der Leber* (*Archiv der Heilkunde*, 1864.)

‡Rindfleisch, *Microscopische Studien ueber das Leber adenoid* (*Eod. loco*, 1864.)

‖Friedreich, *Beitrage zur Pathologie der Leber und Milz* (*Virchow's Archiv.* xxxij, 1865.)

in the two known clinical observations only offer a very far-fetched analogy with those of our patient. In Griesinger's man, the liver was not only tumefied, but it was the seat of a very marked deformity, resulting from numerous tuberiform projections, rising up from the surface; these projections were hard and resistant: a little later, some of them softened, and became fluctuating at a point where an exploratory puncture was made; the autopsy showed that this transformation had been effected by the regressive liquefaction of some of the morbid masses.

On the other hand, the spleen remained small, there was a considerable amount of dropsy, and the jaundice did not appear until the last weeks of life. This patient, aged 47 years, succumbed to marasmus, but it is to be remarked that he preserved his strength and his embonpoint for a long time, and never had a cachectic aspect; the duration of the disease was two years. In the case of Friedreich, the spleen was enlarged and altered like the liver; this was great, and the icterus, with the persistence of the flow of bile in the intestines, had been the sole phenomenon observed.

Having thus eliminated for very legitimate reasons, as I hope they will appear to you, the extra hepatic tumors which mechanically depress the liver, and the intra-hepatic tumors which, by their eccentric pressure produce an augmentation in volume of the organ without real hypertrophy, we can formulate a much more precise conclusion than the first: we have a chronic disease of the liver itself, the tumefaction demonstrated is the result of a regular and uniform hypertrophy, and we are in the presence of hypertrophic lesion of the organ.

This lesion, is it a cancer? I can not admit it. Hepatic cancer rarely produces a tumor of the spleen; in 91 cases by Frerichs, tumor of the spleen existed only 12 times. Cancer does not always bring about icterus; the same author tells us, that in 91 cases of icterus, it failed totally 52 times, and when it exists, it is in consequence of intra or extra he-

patic compression, ascites marches *pari passu* with it; when the cancer advances to the point of persistent icterus and emaciation, the patient presents a cachectic aspect, the absence of which I have already attracted your attention to, and one never observes boulimia; finally, the liver tumefied by cancer is never smooth and uniform to palpation; it offers inodulations, the inequalities easily appreciable, when a portion of the organ is free beneath the ribs; it has been said that this sign is unreliable, and that the inodulations can entirely fail; this is true, but it is so rare, that though the sign may be impeached, yet it nevertheless to my mind possesses a real value; thus in 31 cases observed by Frerichs, the inodulations failed in only four. The only trait common to cancer, which the pathological aspect of our patient presents, is repeated hæmorrhages; but this symptom appertains to all the diseases of the hepatic parenchyma, and does not characterize any one of them particularly.

If our hypertrophic lesion is not a cancer what can it be? A cirrhosis? Certainly not. *In the classical sense of the word* the name conveys the idea of an atrophy of the liver, of an ascites, and the absence of jaundice; now, we have a hypertrophy of the liver, an icterus dating back ten months, and no ascites. As to this last phenomenon, if our patient presents over her abdomen a markedly developed venous circulation, we might impute to this condition the absence of peritoneal effusion, and this negative symptom thus loses part of its value; but examine the abdomen of this woman with the closest scrutiny, and you will not find a trace of complementary circulation, and the absence of ascites thus assumes an absolute signification. I would not, however, conceal from you the fact, that our patient presents certain of the most important symptoms of common cirrhosis; these are the tumor of the spleen, alternate constipation, and diarrhœa, boulimia, and emaciation, despite an excessive consumption of food. I will soon tell you the cause of these phenomena, and I hope to show you then, that the classical sense of the word cirrhosis is infinitely more restricted.

Whatever it be, the field of investigation becomes more and more limited, and I arrive at my conclusion. It is a visceral lesion, which, commencing by the arterioles has as its first effect, the production of a stoppage or insufficiency of the circulation in the alimentary apparatus by the vessels thus modified; to this *ischæmia* there soon succeeds an alteration of the perivascular tissues, and when this morbid work is generalized throughout the whole of an organ, it increases in volume and consistence without any modification of surface; the liver thus altered is large, hard, and resistant, but is generally smoother and uniform. This lesion consists in the transformation of the normal elements into a nitrogenized substance of a whitish color, faintly bright, of opaline reflection, smooth surface, homogeneous and glistening; this is the amyloid substance, the alterative into which has received the name of amyloid alterative or degeneration. This degeneration is principally observed in the liver, the spleen, in the kidneys, and in the intestinal mucous membrane; in the liver it is sometimes uniform and general, and sometimes dispersed in the form of isolated islets, but in every case the result is the increase of the volume of the organ and its induration. Generally recognizable by its physical properties, the amyloid substance is characterized by the following chemical reactions: in contact with a solution of iodine it assumes a red and slightly yellowish color; if there is then added a drop or two of sulphuric acid, the red tint passes to violet, and then to a violet blue; finally there is obtained a color entirely blue.

The hypothesis of this degeneration accounts perfectly for the physical conditions of the liver of our patient; besides, known observations square marvellously well with the hæmorrhages, and especially well with the absence of ascites, peritoneal effusion in such a case being entirely exceptional. We have, in return, two symptoms which are entirely foreign to this amyloid degeneration; these are the painful paroxysms and the icterus. But, gentlemen, this lesion coincides generally, I will not say always, with

another lesion, which has for its consequences precisely these two last phenomena; this alteration which we have already observed in the lungs, this hypertrophy and hyperplasia of the connective elements—this is *sclerosis*. In the liver as in the lungs, as in the nervous centres, the morbid work is united to congestive pressure, of which the paroxysmal pains are the direct manifestation. During these species of attacks the organ is turgescent, and if it is accessible to direct examination, the fact can be established that there is an increase of volume, partly supervening on the fluxion which has caused it. It is precisely thus that things have happened in the case of our woman; it is this which explains the acute accidents which have so frequently interrupted the calm and silent steps of the disease, and the fever which has coincided with many of these attacks is one proof, to my eyes, of the inflammatory character of this morbific development. After each of these congestions, the connective elements increase in volume and number, at the expense of the proper elements of the organ, and when the lesion is old, it exhibits a visceral net-work of fibrous filaments, radiating and traversing it as membranous bands. You will easily understand that one of the first results of this morbid work, is the compression of the small biliary canals; hence, in the progress of the bile, an obstruction which brings on icterus; hence, also, the variations which the fecal matters present in their color; the compression of the canals not always being in the same degree, it can be conceived that the bile sometimes arriving in the intestine, at other subsequent times it does not get into it; the intensity of the icteric tint varies in the same manner.

Just as compression on the radicles of the biliary passages acts, so also does the connective proliferation act upon the intra-hepatic branches of the vena portæ, and is frequently accompanied by ascites; this symptom being here defective, it is necessary to admit that the venous compression is not sufficiently strong, or general, to produce a serious effusion; but we have a certain proof of an impeded circulation in the

portal vein; this is a tumefaction of the spleen, which is entirely caused by the stasis of blood in the splenic veins, and the passive congestion of the organ. It is by the same mechanism that the gastro-intestinal congestion is produced which is the cause of the alternate constipation and diarrhœa; it is the absence of bile in the intestine, and the insufficiency of absorption by the portal vein which explains the boulimia and falling off in flesh of our patient.

These symptoms, which I have said to you also exist in *common* cirrhosis, have then exactly the same causes, and this similitude in the functional troubles gives an insight into the great analogy in the anatomical process; it is well known that there is more than an analogy, it is a perfect identity; there is in the one instance, as in the other, a proliferation of connective tissue progressing by paroxysmal congestions; in a word, in both instances there is an interstitial hepatitis. The idea of atrophy united to the word cirrhosis since the time of Lænnec is erroneous; atrophy is possible, but it is not necessary; this is a slow effect of the disease and not a primordial effect; it is necessary, then, to much extend the sense of the word cirrhosis, and to see in it, simply, an abbreviated expression which designates the proliferation and the induration of connective tissue, without implying either atrophy or granulations, or rather letting fall into desuetude that which would be still better for surely avoiding all equivocation. It has been proposed to admit an hypertropic cirrhosis, and according to this terminology, our patient would be affected with a hypertrophic cirrhosis; this distinction is certainly just, but it seems to establish between the two states a difference of nature, while, in reality, there only exists a difference in degree or age; that which is constant is the hyperplasia of the connective tissue of the organ at the expense of its proper elements, and another constant is, the induration or sclerosis, but the atrophy and the granular state which results from the retraction of the new tissue can fail; it is then preferable to designate the morbid process, as a whole, by

the alteration essentially characterizing it, by the sclerosis, if we should not like better the name interstitial hepatitis, which is preferable in many respects.

I have said to you that the secondary, or atrophic period of the disease, may fail; there is then found on autopsy a fatty liver, resistant and uniformly indurated with excessive development of connective tissue, but without a trace of granulations. I have already observed a case of this kind, and my friend and colleague, Dr. Desnos, has seen another, in which a microscopic examination, made by Robin, showed nothing but a colossal hyperplasia of the connective tissue without any granulation; in this last case the ascites had totally failed up to the time of the death of the patient, the icterus, on the other hand, had endured for several months.

To resume, I think our patient afflicted with a complex lesion of the liver, the two elements of which generally progress together, that is, a sclerosis, or interstitial hepatitis, with amyloid deposit. To the sclerosis belong the paroxysms of pain; to the icterus, the troubles of nutrtition and digestion, and the tumor of the spleen; but the particular characters of the hepatic tissue, this resistance beneath the finger, this ligneous hardness, has not seemed to me to be imputable to anything but the amyloid lesion. I have no reason to admit its existence, and the first part of the diagnosis is very surely the most certain. Indeed, in absence of any direct and positive symptom which can induce a recognition of the amyloid lesion, there is generally the support of one indirect proof which fails us in the present case; this proof is drawn from the etiological conditions of the disease; these are in their order of frequency, prolonged suppurations, and especially osseous suppurations, constitutional syphilis, old malarial poisoning, and tuberculization. Now, not one of these conditions exists in our patient; I still repeat it to you that it was not until after the results of palpation that I was led to admit in her an amyloid degeneration, coincident with an interstitial hepatitis. This instance, further-

more, will not be the first example of an amyloid lesion arising in the absence of the ordinary causes. Wilks has reported two analogous cases,* and Frerichs, in the etiology of this alteration, has reserved a distinct paragraph for the indeterminate causes.

For ameliorating the state of our patient, I have vainly had recourse to the recognized means, either against amyloid transformation, or against the chronic interstitial hepatitis. The iodide of potassium and the iodide of iron, which have sometimes given good results, have been ineffectually employed; the mercurials, under the form of calomel and blue pill, have not been any more useful; the muriate of ammonia, advised by Budd, in the dose of 60 centigrammes to 1 gramme daily, has equally failed, and after this fruitless essay, not having it in our power to send the patient to the waters of Ems, Weilbach, Aix la Chapelle, or Carlsbad, which have succeeded in certain cases, and having but little confidence in the baths of dilute nitro-muriatic acid, I was restricted to a palliative treatment; I am sustaining the strength by wine, quinia, and iron; I treat the constipation when it is prolonged, and the diarrhœa when it persists beyond measure, and things will go thus for a more or less long time up to the death of the patient; this is the only possible termination of this disease.

Three months and a half later, this patient died comatose, the epistaxis and hæmoptysis persisted to the end, and during the last weeks ascites supervened. There was no modification of the state of the liver and spleen. On autopsy, these two organs alone were altered. The spleen was enlarged, softened, and engorged with blood; all the portal system was markedly congested; it was pure serosity, which was contained in the peritoneum; the quantity was not measured. The liver, heavy and voluminous, presented the abnormal dimensions which percussion had

*Wilks, *Cases of Lardaceous Tumors and some allied Affections* (*Guy's Hospital Reports*, 1836).

recognized during life; immediate palpation gave the same results as mediate exploration, which had been so generally practiced across the abdominal wall; there was the same uniform induration, the same wooden-like resistance, as if the liver were placed flat upon a table; it was impossible to indent the convex face with the hand; the organ resembled a block of fibro-cartilage in its perfect compactness and homogeneousness. The surface, smooth and even, presented neither granulations nor depressions, but numerous white spots occupied the sub-hepatic peritoneum. The tissue creaked and resisted on cutting, and the section was clean and smooth; it was remarkably exsanguined, and of a grayish white appearance. Upon the background, there had appeared, isolated the one from the other, certain yellowish points representing the normal elements of the liver, bound down and atrophied by the immense development of the interstitial mass; the wide separation of these yellow points, clearly showed that a great part of the lobules had disappeared. The gray substance interposed was exactly like hardened lard, and the organ thus modified offered a perfect type of what has been called the lardaceous or waxy liver. Then, in the presence of these alterations so clear I could not, for an instant, doubt the simultaneous existence of the two lesions which I had diagnosticated. This phrase of Frerichs: "By the combination of the amyloid and sclerosis induration, it forms a great fatty liver, which, by its consistence and its color, presents a certain analogy to hardened lard;" this phrase, I say, comes to my mind, and confirms me in my opinion. The chemical examination decided otherwise; despite many trials, I could obtain but the first part of the reaction; the whitish gray substance, on contact with iodine, readily took on a reddish yellow color, but by the addition of sulphuric acid I could get neither the blue nor violet. There was then no amyloid matter; an hypertrophy of the connective tissue was then the only cause; not only had it produced great fibrous filaments, which partitioned off the organ, but the confluence and development of these

neoplastic elements had been such, that they constituted by themselves, without any foreign deposit, this fibroid stroma, in which were plunged the surviving hepatic lobules. This was a perfect type of connective sclerosis, or interstitial hepatitis. By the union of these physical characters, this liver merited in a supreme degree, the appellation of lardaceous, or, better still, waxy, but it was not amyloid, and this fact well demonstrated the necessity of the distinction which I have elsewhere formulated.* We ought not to establish a parallel between the expressions waxy and fatty on the one side, and amyloid on the other; the words waxy and lardaceous appertain to physical characteristics, the word amyloid to chemical; the presence of the first does not necessarily imply that of the second; it is, then, not necessary by a synonymous terminology, to preserve a connection which is not real. Every amyloid liver is waxy, or lardaceous, but every waxy or lardaceous liver is not amyloid; observe the fact, our observation abundantly proves it. The liver was waxy, because it presented an excessive hyperplasia of connective tissue; it was not at all amyloid. You will find in the memoir of Mackel† on the lardaceous disease, many analogous cases, in which the waxy appearance existed and the iodo-sulphuric reaction failed.

Under the influence of the always increasing development of connective tissue, the branches of the portal vein have been more and more compressed, and it is this which explains the appearance of dropsy during the last weeks of the life of our patient; on the other hand, the secretory elements of the liver have been more and more stifled by the parasite-like invasion of the neoplastic tissue, and the production of bile fell to a minimum which was incompatible with life. I do not hesitate to ascribe to the insufficiency of the biliary secretion, to the acholia, the comatose accidents of increas-

* Jaccoud, *Degenerescence amyloide. Nouveau Diet. di Med. et de Chirurg. Pratiques, II. Paris*, 1865.

† Meckel, *Die Speck- oder Cholestrin-Krankheit* (*Ann. des Chariti Krankhauses*, IV., 1853.

ing gravity, which in six or seven days brought death to this woman. In cases of this kind, observe the fact, that it is not because the bile fabricated by the liver re-enters the blood that poisoning takes place, it is because the liver does not make more bile, and that the materials which serve in this operation accumulate in the nutritive fluid; it is thus acholia which kills, and not cholæmia.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

LOUISVILLE OBSTETRICAL SOCIETY.

The Society held its regular annual meeting on the 17th of November, 1870, and the following gentlemen were elected officers: President, Dr. J. A. Octerlony; Vice-President, Dr. W. Bailey; Recording Secretary, Dr. W. D. Morton; Treasurer, Dr. S. Brandeis; Librarian and Curator, Dr. W. H. Newman; Corresponding Secretary, Dr. S. H. Homor.

The retiring President then delivered his farewell address to the Louisville Obstetrical Society, as follows:

Gentlemen: As the term of office for which I have had the honor of presiding over this Society expires to-night, it becomes my duty to make to you a statement of the Society's condition and progress. The unbroken harmony of sentiment, and the uniform kindness of feeling that have prevailed among us as a body, make that a real pleasure which might otherwise prove a most embarrassing labor. While other organizations of a similar character in this city, and some of them of older date than our own, have been subjected to such painful dissensions and disorders as to result in the injury of all, and the entire disruption of some of them, we have without interruption continued our twice-monthly meetings throughout the entire year. Not even

through the oppressive heat of the summer months did we permit an adjournment, as was the custom previously existing, and only once or twice have we failed to have a quorum at our meetings. And at these meetings we have spent no time in the discussion of idle and mischievous questions that would, probably, have resulted in rancor and bitterness; but, as I have before stated, and take pleasure in repeating, these meetings have been characterized by that cordial good feeling that should prevail among friends, and that respectfulness of language and deportment which the dignity of our calling demands from and for each other.

During the last year, as will appear by the Secretary's Report, we have had five active members added to the Society, while we have to regret the loss of two by resignation; and, in common with the whole scientific world, do we mourn the loss by death of Sir James Y. Simpson, an honorary member, who was not only a master-spirit in our department, but was one of those whole-hearted Christian men in whom all humanity might find a friend and brother.

To our list of honorary and corresponding members we have added most of the illustrious names of this country and of Europe; and you all must have noted, in listening to their letters of acceptance, how heartily they have extended to us their encouragement and good will.

We have during the year received a few valuable contributions to our library with promises of others. These books and pamphlets, together with the periodicals heretofore subscribed for by the Society, constitute our present library. This collection of books, although valuable, is much smaller than it ought to be at this time of our Society's existence. I would therefore suggest for your consideration whether the ninety-two dollars, which the treasurer reports as on hand, or due the Society above its indebtedness, might not safely and very profitably be invested in books. It is certainly desirable that the Society should possess the writings of the best authors upon obstetricy, and by an annual expenditure of ninety-two dollars, we should in

a few years possess a valuable collection. The value to the members of even such a library as would be formed by the addition now proposed, can scarcely be over estimated. I venture to say that the number of written communications submitted by the members, in the last year respectable, would be increased by having even this small collection of select books at command.

I would, in this connection, respectfully urge a matter which I have mentioned several times during the past year, and which has more than once occupied your attention, though never, I believe, with the thoughtful consideration which its importance demands: namely, the propriety and importance of the publication of at least some of the discussions which we are finding so interesting and so profitable to ourselves, and which would prove equally so to others, especially to our country practitioners, who, on account of their remote locality, remain ignorant of much that they would in this way be able to learn. Several of our own contributions have, as you are aware, been published during the past year, and it is to be hoped that henceforth the custom of publishing our proceedings and discussions may be established; and that many of the useful lessons that are learned and taught in this society may not be lost to the profession at large; but that through the agency of some of the medical journals, any of which would, no doubt, cheerfully give publicity to them, they may assume that form in which they can permanently benefit ourselves and others.

I would also respectfully call your attention to the duty that rests upon this Society of collecting and arranging statistics on various subjects belonging to our department, especially those connected with Midwifery and Diseases of Children. The large number of deaths among infants, reported weekly by the City Health Office, should, probably, ere this, have occupied our attention. Something might be done by this Society towards the discovering and prevention of this large mortality.

I need, scarcely, in conclusion, urge you all to greater

zeal and earnestness in the promotion of the special objects to which our investigations and researches are applied. Much has been accomplished in this work. Very much remains yet to be done. The field is ample, and the work is honorable. There is no department of medical science upon whose progress and development the happiness and welfare of mankind so much depend; for, without a healthy, vigorous race of mothers, what of greatness can be expected of the offspring? But aside from this mere utilitarian view of the subject, the work is pleasant as well as noble and profitable. Ours is peculiarly a labor of love and mercy to afflicted and suffering woman; and had we no other recompense than to watch the blooming of the roses of health, whose seeds we have ourselves been instrumental in planting in cheeks wan and wasted by disease, this alone should almost satisfy us.

The duty of presiding over this Society, has, gentlemen, been to me most delightful; and for the distinguished courtesy with which you have, at all times, been pleased to treat me, while occupying this chair, I desire, in the strongest possible language, to convey to all, and each of you, my profound acknowledgments.

JOHN A. OCTERLONY, *President.*
W. DOUGLAS MORTON, *Recording Secretary.*
W. H. NEWMAN,
S. H. HOMOR,
W. DOUGLAS MORTON, } *Publishing Committee.*

BOYLE COUNTY MEDICAL SOCIETY, KY.

At a late meeting of the Boyle County Medical Society, "it was moved and carried that a committee be appointed to co-operate with the other physicians throughout the State, in urging the representatives to the Legislature and Senate, to use their influence in effecting the passage of the following bills at the next session of the Legislature:"

"1st. The passage of the Registration Bill. 2d. The passage of a law making counties liable to the physicians for attendance on the county poor. 3d. The passage of a law

preventing druggists, and all other persons, without license or diploma, from prescribing or practicing as physicians. 4th. The appeal of the present penalties attached to obtaining subjects for dissecting.

GEO. F. ERWINE, *Sec. B. C. M. S.*

Hall Medical and Surgical Society of Montgomery, Ala.,
MONDAY EVENING, Nov. 7, 1870.

The subjoined preamble and resolutions were adopted by the Society at its last meeting of this date:

Resolved, That the following communication, embracing the subjoined preamble and resolution, be printed, and sent by the Secretary to each regularly organized Medical Society in the State:

TO THE MEDICAL SOCIETIES OF ALABAMA:

We herewith submit to your favorable consideration the following preamble and resolution—not doubting that justly appreciating the serious import, which the disposition of the question at issue will have upon the cause of medical education—and especially upon the professional status of Alabama, you will extend to them your most earnest consideration and deliberate action:

WHEREAS, The Medical Association of the State of Alabama, in a series of resolutions, at its session of 1869, advised all medical students of the State to attend "the curriculum of studies in the Medical College of Alabama," and, in addition thereto, confident that those in charge would continue to conduct it in a manner becoming a first class school, not only in regard to the requirements of graduation, but also as to the collegiate charges, requested the Institution to send annually a delegate to its meetings;

AND, WHEREAS, We have lately read with surprise and regret a circular emanating from the said Institution, proposing free instruction to "students from every section of the Union," thus, in our opinion, taking a step calculated to lower the standard of medical education, and antagonizing the resolutions relating to Medical College Fees, adopt-

ed by the American Medical Association, at its session of 1869, and not subsequently repealed;

And, Whereas, We believe such a proposition is unjust to the medical schools of the United States, especially to those of the South, laboring arduouslyito sustain themselves in accordance with time-honored customs;

And, Whereas, We sincerely fear that the prospects of the only Medical School in our State are seriously jeoparded, if not actually ruined, by the proposed change; be it, therefore,

Resolved, That we protest against the system of gratuitous instruction adopted by the Faculty of the Medical College of Alabama, located at Mobile, and most sincerely hope whatever success, in point of patronage, may attend their new plan, to see them return to their former charges.

Sam'l E. Norton, *Secretary*.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

Honolulu, Sandwich Islands, Nov. 24, 1870.

Z. Pitcher, *Associate Editor*, Detroit, Michigan:—*Dear Sir:* In accordance with your request, I will answer a few of your interrogatories in regard to the existence of leprosy upon these islands. In attempting this, I hope you will not think that I pretend to any originality in anything I may say of this most disgusting of all diseases. I shall in its consideration confine myself, mainly, to such facts as have come under my consideration since my residence here.

Leprosy is not indigenous to these islands. It has made its appearance here within the last thirty or forty years,

the old foreign residents differing very much as to the time. Some say that the importation of the Chinese coolie brought it; others that it has existed long before the coolie came to the islands, and claim that it is the result of Portuguese emigration.

How it came here is a matter for future discussion. I feel myself incompetent to give an opinion upon this part of the subject, but from the best information I can gather, it did not exist when the American missionaries first settled upon the island.

It is an undeniable fact that it exists here at the present time, and how to get rid of it, is now, and has been from its inception, a subject of agitation to the foreign population and the better class of Hawaiians. The legislature of 1865 passed an "act to prevent the spread of leprosy," and placed the matter in the hands of the Minister of the Interior (Dr. Hutchinson), who, acting with the approval of the Board of Health, of which he is president, has confined and isolated all leprous patients who were deemed capable of spreading the disease.

As absolute segregation was thought to be the only effectual remedy for this disease, the proof of which is handed down to us from the days of the Crusaders, a portion of the beautiful island of Molokai, one of this group, was purchased and set apart by the government for this purpose. Great difficulty was at first experienced in effecting the separation of man and wife, parent and child, but through the constant and untiring exertions of his excellency, the minister of the interior, it is a decided success, and the asylum at Molokai has now two hundred and sixty-nine comfortably fed and lodged persons, of which one hundred and seventy-nine are males and ninety females.

The vices of civilization, which exist to a large extent among the native population, have much to do with the disease in my opinion, together with their mode of living, generally in low thatched huts, sleeping on mats spread upon the bare ground, and the common use of a drug called

"awa," which the people universally believe is a sovereign remedy for all skin diseases, greatly tend to enervate and bring out any predisposition to disease that may be lurking in the system.

There are many throughout Europe, and a few medical gentlemen here, who have had some little experience with this disease, that believe it is caused by syphilis, and is merely its ulterior consequence. This does not agree with the opinion of those who have carefully watched and examined the disease in all its different stages, yet I do not pretend to dispute the fact, as I have before stated, but that one or all of the causes assigned above, do have a marked influence upon the disease.

How far a leprous taint may, under certain circumstances, engender syphilis, I am not prepared to state, but I do not believe that leprosy has any other connection with syphilis, or other known disease. My experience fully confirms me in the opinion that it is an albuminoid disease, that it is contagious, and is a morbific poison, introduced into the blood by a person suffering from the complaint, and that it is inherited. It was known in India, and described by the Hindoo and Arabian physicians for centuries before syphilis was ever known.

The development of the disease in most cases is slow, but in a few it is sudden and active. The premonitory symptoms frequently last for years. It is often difficult to define the anæsthetic from the tubercular varieties, they being frequently so blended the one with the other.

In the anæsthetic variety, the skin gradually loses its sensibility, and in the natives of the islands who are black, its dark color is altered; the pigment appears to be gradually absorbed, in some entirely, in others only partially; the color of the skin varies from dusky olive to an almost pure white. These patches generally lose their hairs, are free from perspiration, and of a much lower temperature than the surrounding skin: of irregular shapes and size, sometimes, but seldom, embracing the whole limb; it finally de-

generates into ulcers, as in the tubercular form—the anæsthetic commencing most generally in the little and ring finger of one or both hands.

The tubercular form predominates here. That which gives to it its name, and at once enables one to diagnosticate it from any other disease, is the peculiar hypertrophy of the skin which attends it. It makes its appearance in the shape of small tubercles on the alæ of the nose, lobes of the ears, the skin of the forehead and cheeks, ends of the joints of the fingers, and toes; the skin is of a dusky color, and in the aggravated cases, the skin of the lips and eyelids is similarly affected, producing a revolting aspect; the disease goes on slowly but surely, and without hindrance, increasing, when from failing nourishment and unhealthy condition of the blood, the hypertrophied portions of the skin begin to ulcerate and discharge an offensive and ichorous sanies, which gradually leads on to the implication of the deeper structures.

Either of the varieties named leads to the more revolting and pitiable condition of the last stage. It would be impossible to give you an accurate idea of its effects upon a human being, to see the object is to realize its horrors—the mutilations of the fingers and toes, and in some cases the whole hands from the wrist-joints, and the feet from the ankles. This is usually the sequence of the tubercular form.

I might go on enumerating symptom after symptom, as I have already stated—the hands chopped off, finger by finger and joint by joint, their noses eaten away, their lips sloughed off, the unearthly sound of their voices, etc.; but as the symptoms of this disease are discussed in the medical journals of the present day, I will not occupy your time in its further consideration.

You would like to know, probably, what has been done in regard to the treatment here of leprosy. This part of the subject is easily answered. The premonitory symptoms have, I fully believe, in some cases, been stayed by the

judicious use of arsenic, iodide potass., mercury, etc., but the disease, when fully developed, has no remedy but death. As I have said in the fifth paragraph of this letter, the only means of mitigating the progress of this most revolting of all diseases, is a strict separation of the infected from the healthy people, as was practiced in the middle ages, and in no part of the world has this been so completely effected as it has been here.

You can make whatever use you see fit of these hurriedly written lines, and believe me, when I say, I have the pleasure of being yours, most faithfully,

JOHN S. MCGREW, M. D.

LOUISVILLE, December, 1870.

Believing that the readers of your journal will be interested in regard to the chemical body which, though long known, is but now attracting so much attention, I send for publication the following facts and views in relation to it. This body is known as chloride of ethylidene.

We are indebted to Dr. Liebreich, of Berlin, for our acquaintance with this new anæsthetic. Like chloral, it was a mere curiosity on the shelves of the chemist, till he, by a correct reasoning process, applied it to therapeutic uses.

The discovery of these medicinal agents may be likened to that of Leverrier, who, by reasoning based on mathematical calculation, pointed out to telescopists the position of a new planet. Liebreich, in like manner, by chemical reasoning directs the therapeutist to a new remedy, endowed with new and valuable properties, and free from many of the objectionable features of those already known.

Ethylidene is a hypothetical body, only known in combination, and does not possess a separate and independent existence. Its compounds, so far as we are acquainted with them, are all artificial, and do not exist in natural bodies. Its chemical formula is $C^4 H^4$, being isomeric with ethylene

(olefiant gas). Its compounds are likewise isomeric, with the corresponding compounds of ethylene, e. g.:

Ethylidene, $C^4 H^4$.
Aldehyde, $C^4 H^4 O$.
Chloride of Ethylidene, $C^4 H^4 Cl^2$.
Ethylene, $C^4 H^4$.
Oxide of Ethylene, $C^4 H^4 O$.
Chloride of Ethylene, $C^4 H^4 Cl^2$, etc.

Chloride of ethylidene is produced by the action of pentachloride of phosphorus upon aldehyde, thus—$C^4 H^4 O$. plus $P. Cl^5$ equals $C^4 H^4 Cl^2$ plus $P. O. Cl^3$. When oxide of ethylene (glycol), the isomer of aldehyde, is treated with pentachloride of phosphorus, chloride of ethylene (Dutch liquid) is formed. These bodies, although identical in ultimate chemical composition, are different substances, as is evidenced by some of their physical and chemical properties. The former has a specific gravity 1,189 at 40° Fahrenheit, and boils at 140°, while the latter has a specific gravity 1,256 at 53°, and a boiling point 186°. They differ also in their behavior with alcoholic potash, chloride of ethylidene not being affected by it in the cold, while chloride of ethylene is decomposed thereby into chloride of potassium and chlorethylene ($C^4 H^3 Cl$).

These prefatory remarks, in reference to the chemistry of chloride of ethylidene, are made in order to show that it is not, as many suppose, the old liquid of the Dutch chemists, which was experimented with many years ago, before the discovery of chloroform, and discarded after the introduction of the latter anæsthetic. To test the powers and observe the effects of this new anæsthetic a man was selected, aged about thirty years, apparently healthy, who gave his consent to inhale its vapor, and have a tooth extracted while under its influence. This was done in this city.

The vapor was administered from a two-necked bottle loosely filled with dry sponge. One of the necks of the bottle was provided with a tube furnished with a valve in its side opening outward, and a properly shaped face-piece

to cover the mouth and nostrils; the other neck was traversed by an open tube reaching to the bottom of the bottle. This arrangement allowed free access of air to the bottle through the latter tube, while the gases from the lungs passed into the atmosphere through the valve in the first above-mentioned tube, thus insuring the patient a free supply of a pure mixture of air and the anæsthetic vapor. The patient had eaten a hearty dinner about an hour before the commencement of the experiment; his pulse was 80 per minute; color ruddy. In about a minute after the inhaling tube was placed over his mouth and nostrils, his pulse mounted to 90, then to 100 and 120, when the period of excitement came on; his color heightened, and he gave expression to the delightful sensations he enjoyed. In less than a minute afterward he was himself again and his pulse was 80, and said he felt as well as before inhaling the vapor. After the lapse of twenty or thirty minutes he again inhaled the vapor, and promptly passed to the period of excitement, the pulse quickly mounting from 80 to 125, when suddenly he pushed the apparatus aside and made energetic pugilistic demonstrations. In a few seconds he passed from under the influence of the anæsthetic and expressed himself as feeling perfectly well; pulse 80, and color natural. No difference in the rapidity of his breathing was observed up to this time. In about half an hour the apparatus was reädjusted, and he again commenced to breathe the vapor; and in the course of a minute to a minute and a half he passed the stage of excitement, breathing more slowly and deeply. His pulse having gone to 120 to 125, it gradually but quickly fell to 100, then to 90, and finally to 80, when Dr. Canine promptly extracted a bicuspid, during which operation he exhibited decided evidences of consciousness, shown by his struggling movement of the arms and by moaning. His eyes were closed. After the extraction of the tooth, he lay quiet long enough under the influence of the anæsthetic to have had perhaps ten more teeth extracted. He then opened his eyes and complained of slight nausea, qute unconscious of every-

thing that had been going on. His pulse, during this time, at 80, and his color and complexion were not changed or altered during any of the experiments, except as above stated. At the period of excitement his color appeared to be slightly heightened. No pallor nor lividity was noticed at any time, nor was the force and volume of the pulse diminished in an appreciable degree. The last experiment lasted about five minutes. The nausea following the last administration of the anæsthetic was to be looked for, since it almost always follows the rapidly repeated administrations of anæsthetics (even of nitrous oxide), especially when the stomach is replete with food. Altogether one ounce, by weight, of the chloride was used.

The points to be noticed in this experiment are principally the following: 1. The rapid production of anæsthesia. 2. The prompt recovery after the administration of the vapor is suspended. 3. The maintenance of normal heart action, as shown by the rapidity, volume, and force of the pulse after anæsthesia sets in. 4. The freedom from pallor or lividity of the surface. THOS. E. JENKINS, M. D.

VICKSBURG, MISS., December 3, 1870.

DR. E. S. GAILLARD, *Editor, etc.—Sir:* I was recently called to see a gentleman who had been suffering with hiccough for thirty-six hours. I tried various remedies with no effect, save a temporary cessation by the use of morphine hypodermically. Finally, I exhibited thirty grains of chloral, which gave immediate and permanent relief. I offer this because it was once my misfortune to see an excellent gentleman die of this affection. Respectfully,

P. F. WHITEHEAD, M. D.

REVIEWS.

"Judex damnatur cum nocens absolvitur."

ART. I.—THE PRACTICE OF MEDICINE. By THOMAS HAWKES TANNER, M. D., F. L. S., Member of the Royal College of Physicians, etc., etc. Fifth American edition from the sixth London edition. Philadelphia: Lindsay & Blakiston, 1870; pp. 1,200.

It is not necessary to say anything prefatory in calling attention to this work. The title, as given above, evinces the fact that it is as familiar in this country as it is in Europe. There is certainly no work on the practice of medicine now before the public which is more fully and justly esteemed. It is excellent in style, teaching, arrangement, and efficiency. If there is a serious fault in Tanner's writings, it is that, in his constant desire to condense, he often omits much which, if not absolutely necessary with the older and more practiced reader, would be extremely valuable to the younger student. It is valuable always to be concise, but where this is carried to the extent of sacrificing important details, it is impossible to avoid regarding such a characteristic in style as a blemish, if not a vice, on the part of the author. Many would reasonably object to the style of Dr. Tanner on this account, but in all other respects, it is only the hypercritical who could discover any reason for censure. It must, in justice to Dr. Tanner, be recollected, that he writes for the busy physician more than for the student of the library, and that, in pursuance of this object he confines himself almost entirely to the essentials and practical details of each subject.

It is unquestionably his desire that his works should be the companions of the busy practitioner, who desires, with the least possible expenditure of time, to learn what is chiefly valuable and important in connection with the subjects

investigated. Criticising Dr. Tanner with this avowed object of his in view, one can excuse his frequent omission of details that would be most welcome otherwise in the elaboration of his subjects. With this understanding alone, can the reader feel that an author is justifiable, when in pursuit of absolute conciseness he omits valuable and welcome details. To such an extent does Dr. Tanner condense, that, not infrequently, he disposes of a subject in one or two pages. This is valuable to the active practitioner, but it is often perplexing and often unwelcome to the younger student.

With this manifest defect, there are few physicians who would not, after examining Dr. Tanner's Practice, prefer it to any published in the English language. He is so watchful and observant, that it is rare for any valuable discovery or practical suggestion to escape his attention. His power of analysis is wonderful and his lucidity of style unsurpassed.

In part I, there is much that is new in connection with rickets, leprosy, and scrofula. In part II, the reader welcomes the author's addition of cerebro-spinal fever and dengue; while there are presented fully the following subjects, wholly or partly omitted in previous editions: œdema of the brain; locomotor ataxia; hysterical, infantile, rheumatic, and syphilitic paralysis, etc. Much new material has been given in connection with the following subjects: Pneumonia, pleurisy, diseases of the heart and intestinal canal. The diseases of the liver and urinary organs are not satisfactorily treated; are not treated fully, and much that is well known in regard to these subjects is omitted. In this respect, Niemeyer is far more satisfactory; indeed, no author, familiar to the reviewer, has as satisfactorily treated of these diseases. Acute desquamative nephritis, pyelitis, pyo-nephrosis, receive from Dr. Tanner a degree of attention wholly insufficient, while cirrhosis and parenchymatous hepatitis are almost as fully neglected.

That part of the work devoted to diseases of the female

organs of generation, while not necessary to a work on practice, is in this volume made most welcome and valuable.

If this work were not so well known, it would be proper to write more in detail in reviewing it; while its extreme value would subject a reviewer to just censure were he to bestow less notice upon it than has herein been given.

It is to be regretted that Dr. Tanner has not more fully analyzed the great subject of inflammation, with all of the inexpressibly valuable contributions that have been made to it by Cohnheim, Stricker, Balogh, and others, during the past ten years. In this connection one can not avoid observing that the characteristic of text-books (as they are called) has, during the last decade, wonderfully changed; they are no longer the pioneers in the field of discovery, but have become the store-houses, for the fruit which has been gathered in the great field of medical journalism. In this field the great medical men of the present age are, as a rule, all at work; with few exceptions, they may all be seen here earnestly and devotedly toiling. It is in this field that one now finds the chief pioneers and discoverers in medicine; while the authors of text-books, coming in the rear of this grand army, assiduously gather up the spoils. One can no longer exclaim with Job: "Oh, that mine enemy would write a book," exposing himself thus to caustic satire and damaging criticism; for, in the history of the present age, it is manifest that the writers of medical books are the great aggregators of the thoughts and suggestions of others, while their own thoughts are chiefly expended in analyzing these collections, giving to them increased force and a developed value.

Indeed, it may, with manifest justice, be said that the great truths and discoveries whose announcement mark the progress of scientific medicine, are to be found first almost invariably in medical journals. They are tranferred thence to text books, where conveniently and systematically aggregated in these modern store-houses of literary and scientific products, they may be found and assimilated by the

great body of professional consumers. Great truths and important discoveries are for years familiar to journal readers and to students in the class-rooms of the best medical colleges, when the most assiduous investigator will look in vain for them in the recognized text-books and assumed authorities of the present day.

In the analysis of the vast material thus presented to the reader in foreign and domestic medical journals, Dr. Tanner has exhibited masterly power and rare judgment. He, above all authors, is prominent, in promptly and judiciously presenting in his works, concise and valuable analyses of the enormous mass of facts yearly submitted by the great and original workers in the profession. His power of analysis and reconstruction is absolute and undeniable.

In conclusion, this work is recommended with earnestness to the reader. Its value can not be over estimated, and its acceptability will be found to be constantly increasing. The publishers have issued it with a most commendable care and manifest liberality.

ART. II.—ANNUAL REPORT OF THE SURGEON GENERAL OF THE UNITED STATES ARMY FOR THE YEAR 1870.

The Surgeon General's report to the Secretary of War, for the last year, gives a statement of the financial condition and general transactions of the medical bureau of the army. After reviewing the property returns, the Surgeon General proceeds to a statistical statement of the sickness and mortality of the army, which shows a considerable improvement of the *white troops* from disease over the ratios of former years, and he remarks: "It is to be regretted that the figures representing the mortality from disease among the *colored troops* are not so favorable." It appears that, "while the rate of mortality from wounds and injuries among the *colored troops* agrees with that among the *white troops*, their rate of mortality from disease alone is nearly double." The

total number of deaths, in the mean strength of 32,429 officers and men, was three hundred and seventy-four, or twelve per thousand. This mortality from disease compares favorably with that of foreign armies and with former reports from our own. The large mortality from wounds, accidents, and injuries, is explained by the Indian hostilities, which, unfortunately, still continue to exist.

Owing to the numerous demands made on the Record and Pension Division of the office, relative to cases of soldiers whose widows or heirs are applicants for pension, and with regard to the particulars of "treatment," and "cause of discharge for disability, in invalid cases" (three thousand four hundred and forty such cases were awaiting answer at the close of the fiscal year, June 30, 1870), the Surgeon General very justly complains of the insufficiency of the clerical force at his disposal.

We learn, also, that the number of medical officers in the army (one hundred and sixty-seven) is inadequate to the exigencies,of the service, and that forty-four vacancies exist, which can not be filled, owing to the act of Congress of March 3, 1869, prohibiting appointments and promotion in the staff corps.

The Surgeon General calls attention to the important reports on surgery, photo-micography, and epidemics, and of the steady increase of the collections of the Army Medical Museum. This institution, already so famous for its valuable collections, has furnished, through the indefatigable zeal and industry of the medical officers connected with it, valuable contributions to medical and statistical knowledge, which are eagerly sought after by thousands of medical and scientific men. The value of these publications may be inferred from the remark of the Surgeon General, who says, with pardonable pride, that European works on military medicine and surgery, published during the last five years, have borrowed many of their illustrations from the specimens and records of the museum. We trust that for the advancement of science, and for the national pride in home

institutions, Congress will liberally and cheerfully supply means to extend this valuable institution, and to continue the publication of the important documents that have emanated from it.

The report concludes by recommending that the medical staff be kept up to the standard number allowed by existing laws, and says that any reduction of that number would be prejudicial to the best interests of the service.

It would be difficult to commend in terms too exaggerated the masterly and efficient administration of Surgeon General Barnes. His department has become a model of excellence and scientific usefulness. Indeed, there is no department of the government which is as fully and as justly appreciated, both at home and abroad, and it may be doubted whether any officer has ever done as much to elevate the true science of medicine in popular and legislative appreciation. Since the termination of the war, the Surgeon General has made the most valuable contributions to practical medicine and surgery, and all who have the welfare of the profession at heart, not only look with pleasure at what he has already done, but with confidence to the contributions already announced and soon to appear.

It is impossible to allude to these facts in regard to the administration of the Surgeon General Barnes, without calling attention to the beautiful and highly scientific contributions that have been made by Surg. J. J. Woodward, U. S. A., and for several years conspicuously prominent in the Medical Department at Washington, D. C. Some of the most valuable and practical contributions made to the science of medicine during the past few years, are justly to be credited to this accomplished and industrious officer.

ART. III.—THE ORGANIZATION AND PROCEEDINGS OF THE FIRST SESSION OF THE MEDICAL SOCIETY OF VIRGINIA, November, 1870. With Constitution and By-Laws.

This pamphlet gives a full account of the organization of the Medical Society of Virginia. The meeting was held at Richmond, November 2d and 3d. The proceedings were harmonious and judicious. There was but one subject to disturb this conspicuous harmony; this was a motion condemnatory of beneficiary scholarships in medical colleges. It was referred to a special committee, and they reported back that they were unable to agree. It is to be regretted that the debate on this subject was not incorporated in the printed proceedings. Now, that so many thousands of our best and noblest citizens in the Gulf and Cotton States and elsewhere are bankrupt, and unable to give their sons a medical education, it becomes a matter of curiosity to learn what possible objection there can be to any aid which may be extended by colleges to these unfortunate but deserving young men. No one can doubt but that all colleges, medical as well as secular, should make some provision whereby the sons of our suddenly impoverished citizens may receive a generous aid in obtaining an education. The question is plain and simple in this connection: whether is it better for a medical college to aid these deserving but unfortunate young men (names being concealed), by a definite and public provision made for this purpose, that is, by appointing them to beneficiary scholarships on the receipt of adequate testimony as to their misfortunes and merit, such colleges publicly admitting that they are receiving this class of students at reduced rates; or, whether is it better for colleges to pretend that they are charging their published prices, when they are doing in secret what they oppose in others doing publicly? If these young men should be aided (and who will make himself odious by denying this), is it not better that this should be done openly and confessedly (while the names of those aided are concealed), than that colleges should receive them at

nominal rates only, while they pretend to be charging the full rates advertised? This question concerns more than one-half of the nation at present, and if a public provision on the part of colleges for aiding the unfortunate but deserving young men is right, why oppose such a provision? If it is wrong, how is it that no one has been able to demonstrate the fact? If any one desires to make this issue before the American people, that it is wrong thus to aid the unfortunate but worthy young men of the land, the pages of this Journal are open to him for the purpose.

This legislation of the Virginia Society was directed against a Baltimore medical college. That was unjust. Other colleges are doing publicly what this college is now doing publicly and almost all colleges are doing privately.

With this exception, the profession had a most harmonious meeting at Richmond. Dr. R. S. Payne, of Lynchburg, was elected President for the next year, and many eminent gentlemen were elected to represent the various offices and committees.

There is one fact worthy of mention, the Secretary was instructed to have the proceedings published in a medical journal. There is one journal in Georgia, one at New Orleans, one at Nashville, two in Louisville, and two at Baltimore, yet these proceedings were sent to Philadelphia for publication. Did any one ever see the proceedings of a Northern medical society published in a Southern journal? Did any Northern committee or society ever so stultify itself? There are many men yet at the South who, like the Bourbon, can never forget an old habit or learn a new one. Such men are never satisfied with praise at home—the respect and esteem of those at home—there is an itching prurience for notoriety elsewhere, and this must be gratified, even at the expense of home respect.

Such men must send their contributions, either of purse or pen, away from home. If any home enterprise succeeds, it is in despite of them; never through them. They belong to a class of men who decry their own army before a battle,

but are blatant, indeed, when this army achieves a victory: a victory which, if all acted as they had done, would have been a desolating defeat. So it is in regard to Southern medical journals. Many men are now doing all that can be done to destroy them. While very many away praise them, these at home decry them. The names of these men are read elsewhere; their means are sent elsewhere. If Southern journals succeed, it is because these who derided and neglected them have been powerless to destroy them. When success comes, such men will be found blatant over a victory, which they had for years conspired to convert into overwhelming disaster.

There is no voice of anger in this; it is the language of sorrow; sorrow over the action of so many who are pursuing a course which has wrecked themselves and their friends; building up the stronger and sapping the strength of the weaker; a course which has ruined their people, and caused them to languish and mourn in a bankrupted land billowed with graves.

There is no envy in these reflections; the journals at the North are worthy of the fullest support; they are in every respect commendable. The South can never equal them in numbers and pecuniary strength until her people have done what the Northern people always do, take care of themselves. It is foolish and idle to say that journals will be sustained when they are prominent and distinguished. Then they will no longer need sustenance; they will have already obtained it. No journal has ever sprung up, like Jonah's gourd, perfect in its birth. Journals need labor, incessant brain-work, energy and industry. These the Southern journals have. But journals need also the capital of purse and pen. Alas! they are being deprived of this by those upon whom Southern literature relies for co-operation, encouragement, and support. Their names are daily read and remembered.

ART. IV.—TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA. Convened at Wilmington, May, 1870.

This publication reflects much credit upon the members of this society. The essay upon "The Heroic Character of the True Physician," by C. T. Murphy, of Simpson county, is written with much force and feeling, and is creditable to both the mind and heart of its author. The report of the successful ligation of the right external iliac artery for traumatic aneurism of femoral artery, by E. Burke Haywood, M. D., of Raleigh, North Carolina, is an excellent contribution to surgical literature. It is plain, practical, and to the point; showing commendable skill and most excellent judgment. The same writer contributes a paper demonstrating the fact of syphilis having been propagated by a kiss. The paper is termed, "A Warning to Lovers," though it is to be hoped that few, indeed, of the male sex carry, in their worship at the shrine of Cupid, the plague-spot stamped upon the face of this reprobate Adonis, a chancre upon the lips. The report upon Medical Experts, by Dr. E. A. Anderson, embodies many practical suggestions and useful facts. One of the best and most useful papers, that have been contributed by this society, is the essay of Dr. W. G. Thomas, on the important subject of Diarrhœa of Children. This paper is prepared with great care, and will be most valuable to all who study it carefully. As an embodiment of long experience and clinical observation, it will be examined with care, and certainly with profit.

The paper, however, which appropriates most of the space allotted to this volume, is one contributed by Dr. S. S. Satchwell, of New Hanover county; it is termed, "The Topography and Diseases of New Hanover County, and a reply to the paper previously contributed by Dr. W. A. B. Norcom, of Edenton, North Carolina." This paper, by Dr. Norcom, is termed, "The Modern Treatment of Acute

Internal Inflammation." It is handsomely prepared; it is a true exponent of the best views held when it was written; it has received just and most honorable notice not only from the foreign and domestic press, but also from many distinguished gentlemen, whose writings and teachings were quoted by Dr. Norcom. Dr. Satchwell's attack upon this paper is well worthy of a close examination; it is an ingenious and subtle, but desperate and untenable defense of the pathology and therapeutics taught by classic but obsolete authorities. The antiphlogistic school finds in Dr. Satchwell a doughty and indomitable defender of its time-honored but rusty and dangerous old weapons. He exhibits a spirit and tenacity worthy of a better cause. Like a true soldier, he will never surrender, even though his brave and once-conquering army has been annihilated, routed, and driven forever from the field. One, in reading his eulogies of mercury and the lancet, and antimony and purgatives, and emetics, etc., feels as though he had exhumed a musty tome of the past century; that medicine, like the drama, may have its Rip Van Winkle; that metempsychosis may, after all, be true, and that the restless soul of an Andral or a Sydenham may have come back to vicariously disturb and destroy another hecatomb of unfortunate victims.

The whole basis of Dr. Satchwell's argument is, that great men taught and thought as he does; and as no equally great men can ever by any possibility be supposed to exist, modern demonstrations must be wrong, while the dreams and fables of the past can alone receive the seal of infallibility. Hippocrates, and Andral, and Sydenham, and Hamilton, and Cullen, and Chomel, and Bœrhave, etc., made positive statements, and, of course, such statements must be true. Why say an artery contains blood, when classic old worthies affirmed that it contains air? Why accept the fanciful ideas of Harvey about the circulation, when he contradicts every aphorism of Hippocrates upon this subject? Why claim that steamers traverse the ocean, when French savans said that this was impossible? Why accept

any improvement in physics or physiology, when "the great lights," as Dr. Satchwell terms them, failed to cast their illuminating rays upon these improvements, to demonstrate their existence and validity? In playful illustration of this anomalous argument, why should the enthusiastic sportsmen tax themselves with the care and expense of ammunition and fowling-pieces while hunting grouse upon Scottish moors, when an admitted authority (who, true to his name, is ever ready to make a noise) in Kentucky, assures us that the pre-historic Scandinavians simply commanded these birds to come down from their favorite tree, the "Pinus Sylvestris," and be caught by that historic animal, the Scandinavian pointer, when forthwith these obedient creatures flocked down in such numbers, that their honored remains now represent a large portion of each kitchen-rubbish heap (popularly known as kjockken-moedding) in that classic but much abused land?

This blind obedience to authority is (to the surprise of every careful observer) the bane and the destroyer of some of the best and most able in our profession. Serious argument is useless in controverting the reasonings of any one who is thus determined to deposit all of his own mental wealth in the treasury of another, and who, when this treasury is believed by the ablest judges to be dangerous and insolvent, can only be convinced by the crucial test of personal ruin. Anecdote may attract at least their attention when reasoning is disregarded. Perhaps nothing better illustrates the comic position of one who is governed absolutely by authority, than this anecdote quoted by Dr. Gross from Moliere; it represents a dialogue between the physician Tomes and the maid Lisette:

"Physician—'How is the coachman?' Lisette—'Very well. He is dead.' Physician—'Dead?' Lisette—'Yes.' Physician—'That is impossible.' Lisette—'It may be impossible, but it is true.' Physician—'He can not be dead, I say.' Lisette—'I tell you he is dead, and what is more, he is buried.' Physician—'I will not believe it, for your

friend has been sick only six days, and Hippocrates says that such a disease never terminates before the twenty-first day.'"

Seriously speaking, however, it is wonderful that Dr. Satchwell and those who think with him can entertain such opinions, when the facts and results (not the theories and dogmas) connected with the treatment of inflammation are even superficially investigated. It needs but the smallest amount of industry imaginable to bring facts which must convert or should convert the most incorrigible disciple of the antiphlogistic school. A distinguished teacher writes as follows in this connection:

"During ten years, 648 cases of pneumonia were treated by different physicians, according to the rules then enforced (1839) by all writers in the Royal Infirmary, at Edinburgh. Of this number, 388 were cured, 38 relieved, while 222 died. Of 107 cases recorded by Louis in 1835, and treated by bleeding and tartar emetic, 32 died. Of 648 cases treated by Rasori, at Milan, by large doses of antimony, 143 died. Andral tells us that pneumonia is one of those diseases the treatment of which is most simple and efficacious—his remedy being chiefly copious blood-letting; and this to be practiced with adults, children, and the aged. Of his 65 cases quoted to prove the soundness of his principles, no less than 36 died."

Contrast these statistics with those of Dr. Bennett, as extracted from the records of the Royal Edinburgh Infirmary. He treated 115 cases of pneumonia, of which 112 were cured and 3 died. Such facts tell the whole story in regard to the treatment of inflammation. The ancient worthies butchered their victims; modern physicians heal and bless them. Such facts form a fitting epitaph for the dead practice of the past, and the most eloquent eulogy upon the enlightened practice of the present. They must convince all but those who will not be convinced. Of such, it can only be said, they are wedded to their idols; let them alone.

MISCELLANEOUS.

"Non omnes eadem mirantur amantque."

The United States Pharmacopœia.—It is evidently a trite proposition that there are few things of more importance to the medical profession than the official Pharmacopœia, or standard list of medicines and preparations; and, as the commencement of another decade has brought the subject agasn before the American medical public, we conceive that it is well worthy our editorial space. Some of the oldest members of our profession doubtless still remember the birth of our national standard; but to most it is probably unfamiliar, and therefore it seems best first to give a sketch of its history, while in a second article its present and future will afford a topic for comment.

Up to 1820, there had been no recognized standard in the United States, nor, indeed, any work which offered itself as such. It is true that in certain districts endeavors had been made to regulate the preparation of medicines, and the Parmacopœias of the Massachusetts Medical Society and the New York Hospital had exerted a limited influence in their respective circles, but they were strictly local in origin and aim, and were by no means supreme, even in their immediate neighborhoods. The constant annoyances and disasters arising from this want of a common standard can well be imagined; and, as the number both of doctors and druggists increased and the intercourse between widely separated communities grew more close and frequent, this state of affairs became more and more intolerable. As early as 1814, Dr. Coxe, in the preface to the third edition of his Dispensatory, proposed the formation of a national Pharmacopœia; but it was not until 1818 that the New York Medical Society, at the suggestion of Dr. Lyman Spalding, made an official proposition, which was received and acted on with warm approbation throughout the country. In accordance with this, the United States was divided into four districts,—Northern, Middle, Southern, and Western; and in each of these a convention was directed to be held. It was, however, only in the Middle and Northern sections that the meetings actually occurred and manuscript Pharmacopœias were prepared.

The latter, at a subsequent general convention, held in Washington, were compared, and out of them was formed a national Pharmacopœia, which was published in Boston, 1820. The reception of this book by the press was not at all flattering, and there can be no doubt that it deserved a large portion of the obloquy freely heaped upon it. The journals of the day are singularly in agreement in their denunciations of the work and of "the gross incompetency or gross neligence of the editor or editors," loudly calling upon them and their co-workers in the convention to buy up and suppress, at their own expense, "the whole impression, that not a copy may reach the European shores." It is not worth while, at this date, to dwell upon the innumerable faults in the work, yet we can not forbear mentioning one as an example: thus, *aqua potassæ* is the name given without distinction to two preparations,—the one a strong solution of caustic potash, the other a solution of carbonate of potassa!

There were, however, some apparently original excellencies, which have been preserved through subsequent editions. It had previously been the custom to arrange medicines in Pharmacopœias in accordance with some real or supposed analogy in their nature or action, and to give precedence to the most important; but in this work the alphabetical order was adopted.

Again, the prevailing complex nomenclature was replaced by a much simpler and briefer one. Thus, assafœtida, in the Pharmacopœia of the Edinburgh College, was known as *Gummi resinæ ferrulæ assafœtidæ*, whereas *Assafœtida* was the short and equally exact title substituted.

The most useful act, however, of the convention of 1820 was the devising a plan for the future revision of the work, in accordance with which the president was instructed to issue writs of election, in January, 1828, to the several incorporated State medical societies and incorporated medical colleges, requiring them to ballot by districts for three delegates to a convention to meet in Washington in 1830. Owing to the hope that the revision might afford a more worthy standard, even the Pharmacopœia of 1820 was, to a great extent, accepted by the profession.

On the 4th of January, 1831, the second convention met, and finally adopted a manuscript copy of a revised Pharmacopœia prepared by Drs. George B. Wood and Franklin Bache as the basis of the new work. This copy was

referred to a large committee for final revision, and, after some slight alterations, it was again referred to a sub-committee for final action. This committee consisted of Drs. Hewson, Wood, and Bache, and under their supervision the book was at last published. It was a work of vital importance to the professional welfare. An acceptable Pharmacopœia was a necessity for further progress. The first had been an acknowledged failure, greeted with scorn and derison. If this met a similar fate, the danger was great that the enterprise would be abandoned.

More than this—opposition had already sprung up, so that there was a further danger that, if the regular revision were of but moderate excellence, two Pharmacopœias would be in existence, recognized in different localities, and the road be entered upon which would lead to the anarchical condition of every large town or petty medical centre having its own distinct Pharmacopœia. Of this opposition Pharmacopœia we have been unable to find a copy, but its history appears to be as follows: Two, or perhaps three, gentlemen met in New York, elected a president and secretary, and then adjourned for five months, directing that, as none of the Western and Southern States were represented in the first meeting, circulars should be sent in the meanwhile to each of the medical societies and medical institutions in those States, requesting delegates to the second session. At the time appointed, the second gathering met. In it were included one gentleman from Charleston, South Carolina, one from Cincinnati, two from Yale College, one from Berkshire Medical College, and five resident physicians of New York, which latter city, as a reviewer naively remarks, was thus fairly balanced against the rest of the United States. It was the work of this convention that was published in 1830 in New York, with the title, "The Pharmacopœia of the United States of America; by the authority of the General Convention."

Fortunately for the profession, the quality of this book was scarcely better than its honesty. Full opportunity was therefore afforded to hostile criticism, and this was quickly embraced by Dr. George B. Wood, who administered a *coup de grace* in a long, scathing review in the *North American Medical and Surgical Journal* for 1831—a review whose bitter and humorous irony is exceedingly well carried out, and contrasts strangely with the better-known dignified style of its now famous author. The hand which

was the chief in building up the Washington revision, whose excellence soon became universally recognized, proved itself in this equally skilful in tearing down its bastard rival. In order to insure the permanence and authority of the United States Pharmacopœia, and with no idea of the pecuniary success whice it has achieved, the United States Dispensatory was soon afterward published by its authors, and American pharmacy, to the astonishment of many, leaped at once, as it were, into the arena fully armed, and prepared to maintain the foremost rank, which it has ever since held.

From 1830 to the present time the history of our Pharmacopœia has been that of the regular decennial meeting and subsequent revisions, and affords nothing necessary to be noted here; and we leave, therefore, the history of the past, expecting in a future number to speak of the present and the future.—*Ex.*

Inman's Formula for Cases of Phthisis.—Thomas Inman, of Liverpool (*The Medical Mirror*), states that his favorite formula for cases of phthisis, or general debility, is this: "Keep the stomach for food, the rectum for physic, and the skin for oil." It is a homely saying, but not the less true on that account.—*New York Medical Record.*

The Journal des Connaissances Médicales, in announcing the recent appointment of the nephew of Sir James Simpson to the chair of Obstetrics in the University of Edinburgh, indulges in this bit of savage sarcasm: "Mais un est à notre époque très-hevreux d'être le neveu de son oncle; cela sert des deux côtés de la Manche."

MEDICAL NEWS.

'Nulla dies sine linea."

The medical public will be pleased to learn that Dr. Geo. Otis, of Washington, D. C., is about to publish two volumes; one, a description of a hip-joint amputation, made last May, which has succeeded: another, in which a fatal excision of the lower jaw is made the text for a disquisition on tumors at the angle. Both papers will be handsomely illustrated by wood cuts. The publications of Dr. Otis are familiar to all who have studied the current literature of the last five years. He is an accomplished physician, an accurate and analytical writer, and one of the most laborious and distinguished of the surgeons now on duty at Washington, D. C.

It has been reported that this journal can be obtained at a discount of 20 per cent. below cost ($5.00) by subscribing for it through news dealers or book agents. This is a gross error. Wherever obtained, the price of subscription, as advertised, must be paid for it. The work is too large to warrant any reduction in price.

The cause of chemistry in London has recently suffered from the loss by death of two of its most distinguished exponents. Dr. William Allen Miller, LL.D., F. R. S., Professor of Chemistry in King's College, died early in October, at the age of 52. He was a pupil of Liebig in his younger days, and, after being for several years assistant to Professor Daniell, succeeded him, in 1845, in the Professorship. His "Elements of Chemistry" passed through three editions. At the time of his death he was Vice-president of the Chemical Society, Treasurer, and Vice-president of the Royal Society, Assayer to the Mint and Bank of England, etc.

Dr. Koch recommends, in asthma and emphysema, pills containing each, arseniate of ammonium .03 of a grain and muriate of morphia .075 of a grain. One pill, increasing to six pills daily, are to be taken.—*Revue Med. Belge.*

Dr. G. Goddard Rogers reports in the *Lancet* several speedy cures of intermittent fever by the hypodermic injection of a neutral sulphate of quinine which is quite soluble in distilled water. The dose used was in adult cases thirty minims, containing one grain of the salt in solution.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

The New Year.—With the commencement of the new year, the first number of the eleventh volume of this journal is sent to its supporters, with a kind and a friendly greeting. May this year be to them one of continued and increasing prosperity; or, if in the infinite trials incident to life, the past and present have brought troubles and sorrow, may this new year bring that which the Scottish king sought in vain from his favorite physician, the "sweet oblivious antidote," that shall "raze out the written troubles of the brain, and cleanse the stuffed bosom of that perilous stuff which weighs upon the heart." May it be a year of usefulness and pleasure; of labor rewarded and happiness well deserved.

For long years, since this journal was established, it has been (with two exceptions) published with a regularity not exceeded by any medical journal in this country. It was commenced when more than one-half of the medical public was bankrupted by the war, and it has been continued perseveringly during a period of unprecedented general trial and adversity. The great wave of insolvency has passed disastrously over more than one-half of the whole country, and the medical press, like all representatives of labor and capital, has nigh been overwhelmed. Nine medical journals that have been commenced since the first issue of this journal are now no more, and several that had been announced have failed to appear; their projectors, like skillful captains, being too wise to embark on so stormy and dangerous a sea. The fate of so many admirable periodicals would also have been the fate of this, had it not been fortunate in enjoying, in its heavy and increasing list of subscribers, a host of able and influential friends. These have ever sustained this journal, with purse and pen, and to these, in the commencement of the new year, when all are privileged

by a natural and welcome warmth, to thaw fully away the hard ice of conventionality, the editor desires to return his earnest and sincerest thanks. Without such aid this journal would have long been forgotten, but with it, it commences the new year under circumstances infinitely better than it has ever enjoyed. With a new outfit of type and material, with a daily increasing corps of able collaborators and contributors, with a subscription list constantly increasing, the friends of the Journal may feel that its usefulness and value must be materially increased, and that with their continued support, its future is satisfactory and assured. In this number there will be found convenient blanks, which need no explanation. Each subscriber is asked to fill these to their fullest capacity, and to return them as early as possible. To the supporters (old and new) of the journal, the editor appeals for their continued assistance in extending the subscription list of the work, and in securing for publication the valued and accumulated records of personal observation.

As has been done so often before, he pledges to all his best labors and constant attention.

A few subscribers have, as is usual at this period of the year, discontinued their support to this journal. On analyzing this list, it is found to consist mainly of those who have abandoned the profession of medicine; those who have, from age, retired from the practice of medicine; those who plead poverty as a reason for such a step; and, lastly, of those whose individual course of action, or whose action in connection with public Institutions, has been fairly criticised and justly condemned. With those constituting the chief part of this list, the editor parts with reluctance and regret; but with those lastly described, the separation is not only easy, but welcome. A journal must be imbecile or corrupt indeed, in its management, if it can be made to deviate from an honest and just course, or if it can be forced into the contemptible and dishonest system of base sycophancy and facile and indiscriminate eulogy, either to secure support, or to retain this, when once it has been contributed.

There are many true friends of mistaken judgment, who have often used every means to dissuade the editor from a course of management which, by outspoken truth and just condemnation, may alienate or offend. To these, and to all who have thought thus without communicating their views, the answer is simple now, as it has always been. It is far more welcome to fail in a just and honorable management of a journal, than to purchase the most brilliant success at the expense of character and the respect of all whose respect should be valued and prized.

At this period of the year, when physicians are subscribing or renewing subscriptions, or hesitating whether they will renew their subscriptions, a few words in regard to the subjects just named are not only proper, but justly demanded. Let it be understood, then, that the course of this journal shall be, in future, as it has been from the date of its commencement. If it can aid, however humbly, (without malevolence, without personalty and without partisanship), in sustaining the truth and the right; if it can secure commendation in behalf of the best men and the best works in the profession; if it can expose the base, the tricksters, the charlatans, and the vicious, who, by their words, example, and deeds, degrade and bring disgrace upon those who have the unspeakable misfortune to be members of the same profession; if it can help to strengthen the maligned, the envied, the good and true, in the medical ranks, when, in pursuit of what is just and right, abuse makes them falter, and condemnation causes them to hesitate; if it can contribute its mite in developing all efforts to elevate the character, improve the condition, and promote the honor and triumphs of medicine; this is (as it has always been) the aim, the hope, the earnest desire of him who has often fallen far short of accomplishing his intended work, but who, nevertheless, can never prostitute an organ of his profession, by devoting its pages to purposes less honorable, less proper, and less true. Those who think that the management of a journal should be addressed to the accomplishment of such purposes,

will be always welcomed as the supporters, by pen and purse, of this work; but those who think differently, that a journal should be a headless creature, without any views or without a policy of its own, or with a policy different from that herein described, had best withdraw their support; their future connection with the work will bring them, most surely, vexation and disappointment.

With these views and promises, plainly expressed and herein publicly reännounced, the Journal enters upon the duties and labors of THE NEW YEAR.

The Proceedings of Medical Societies.—It will be observed that under this caption a new department has been added to this journal. While it is true that very much of what is recognized as the transactions of a society will not repay the reader for examination, it is no less true that very much of the most valuable material which is thus contributed to the available resources of the profession either becomes lost, from want of an accessible record, or is still-born, from a want of that healthy circulation which alone can give it vitality. Nothing tends so much to increase the respect of the American physician for his medical countrymen as the systematic examination and analysis of what they have done and are doing: their successful labors and their scientific triumphs. It is, unfortunately, one of the many stigmas upon the American people, that they are morbidly prone to undervalue everything and every one surrounded with the associations of home; while they are equally prone to overvalue all that comes before them bearing the magic evidence of a trans-Atlantic origin. This unworthy characteristic, which Dickens so excellently ridiculed, and which Thackeray satirized so unmercifully with his caustic pen is (it is unpleasant to confess) very prominently manifest as well in the medical as in the secular public of America. Of the physicians of this country, it may well be said, in the language of Pliny: "Ea sub oculis posita negligunt: proximorum incusiosi, longinqua sectantur;" "they neglect those things oc-

curring under their immediate notice, and regardless of what is always accessible to them, desire only what is foreign and remote." It is believed that nothing will tend more happily to remove this unworthy characteristic than a systematic and public record of the excellent and valuable lessons to be derived from the transactions of medical societies. With such a conviction this new department of the Journal has been added to those already existing. It is at the service of all medical societies, one request being seriously urged in regard to it; that request is as follows: that secretaries of societies shall endeavor to furnish *abstracts* of what is really valuable in the proceedings of their societies, and not expect or ask that the pages of this journal shall be burdened with irrelevant matter, which would be nothing but a burden even upon the private records of a society. There are a certain number of men in every society who feel it incumbent upon themselves to try and say something in regard to every subject, and who, while they can always be congratulated upon a praiseworthy desire to make laudable exertions, must, in justice, be condemned, or sympathized with, for the uniform abortiveness of their usual efforts. More briefly, there are bores in every society. Even when debates are not to be published, these men are habitually unendurable, but when the transactions are to be printed, such members are notoriously insufferable. It is clearly understood, therefore, that secretaries of societies shall send *abstracts* of the proceedings, unless in their judgment the debate is so valuable and instructive as to warrant a publication of it in extenso. With this understanding, this department is placed respectfully at the service of all medical societies, and it is to be hoped that the material contributed will be found a true exponent, or translation, of the Latin motto which represents the department: "Etsi non prosunt singula, juncta juvant;" though when isolated it may not be prominently attractive, when aggregated, the result must be happily effective.

EDITORIAL BREVITIES.

By an error, much regretted, two portraits, instead of one, were bound in the December Journal; one of these was intended for the January Journal. Subscribers will have their numbers bound accordingly. Though these portraits were copied from an excellent German work, the name appended to each portrait is incorrect; the names have been reversed; the name of Skoda should appear where the name of Rokitansky is given, and that of Rokitansky where the name of Skoda is given.

The physicians of Kentucky should remember that the next meeting of the State Medical Society takes place at Covington, on the first Tuesday in April next. The proceedings of the last meeting read painfully like an epitaph, and, to speak plainly, they are a disgrace to the profession of the State. When the States which were ruined by the war are, many of them, issuing handsome and valuable transactions, it is incomprehensible that the physicians of Kentucky should appear to be in a condition of official hibernation. Surely these gentlemen are not willing that a State which has achieved an admitted medical reputation, equal to that of any in this country, should have this reputation tarnished or obliterated because it has been temporarily entrusted to their guardianship! It is unmanly, ungenerous, and unfair for physicians to cling, at such a time, to their duly routine of duties, because it is pecuniarily profitable for them to do so, and expect that their brethren are, at any cost, to go forward (relinquishing every important home labor) and secure a reputation for a society which delinquent members are to equally share and enjoy! To sustain a society, and beyond all societies, a State medical organization, is the manifest duty of all who have become responsible for its character and development. Clinging to daily duties, and the money rewards springing from their execution, may be pecuniarly profitable, but is not any reward to be de-

plored when obtained at the expense of character? These suggestions are applicable to physicians in any State who are inexcusably remiss in performing those society obligations which they have voluntarily assumed. It is to be hoped, therefore, that every member of the Kentucky State Medical Society will feel that there is incumbent upon him the manifest duty of coming forward at Covington, and contributing freely of his pecuniary and professional resources, for maintaining the character and honored reputation of this distinguished body. The meeting will take place at Covington and, no doubt, will be fully attended by the physicians of Cincinnati and the surrounding country in Ohio. These gentlemen will be welcomed to this meeting, and it is to be hoped that they will come in large numbers, feeling satisfied that they will be gladly received and hospitably entertained. In behalf of the physicians of Kentucky, an invitation is hereby cordially extended to them.

In the last Journal, attention was called to the masterly report of Dr. Jacobi, of New York; in this he exposes the great mortality of infant children in foundling hospitals, and in none more completely than in that hospital in which he has held a most prominent position on the hospital staff. Those who have read this report, not only admire the author for his research and analytical skill, but for more than this, for his manly candor and honest confession of the disasters attending his own efforts and those of his colleagues. It was supposed that this report would be regarded as a crowning glory for the honesty of the staff and the board of female managers of the hospital. On the contrary, Dr. Jacobi's place has been declared to be vacant, and he is to be disgraced for his candor and noble honesty before the public. It is difficult to find words in which to fully denounce such an outrage upon medical science and its worthy votaries. The managers are females, and they must be spared; but while on this account only they will be spared, it is proper to say that were they of the opposite sex, they would justly receive

the most bitter and unsparing condemnation. The public wishes the truth, and has a right to this: more especially where the lives of helpless innocents are at stake; anything approaching trickery or concealment must justly destroy the utility of the institution and the character of those responsible for its management. It will be anticipated by all independent and upright readers, that the hospital staff remonstrated against this indignity and injustice perpetrated upon one of its members! What is to be said, what will be said of them, when it is known that they have passively, docilely retained their positions, and cling, with a tenacity worthy of an honorable cause, to offices which can not fail now to entail upon them dishonor and just reprobation. Who constitute this staff? Can any one give the names of this Body?

Dr. J. S. Weatherly, of Montgomery, Alabama, has recently contributed an excellent letter, on the subject of medical education, to the New Orleans Journal of Medicine. It has special reference to the action of the Faculty of the Mobile Medical College in offering gratuitous instruction to students, while (when asserting that the original equipment of the College by the State, places the Faculty above and beyond compensation) this Faculty yet charges $25 for matriculation; a sum five times as great as that charged by any College in America. This action simply places this College in the attitude of charging $25 for its services to each matriculant. Dr. Weatherly contends for a principle unversally recognized in all commercial and mercantile circles—a principle undeniably true throughout the civilized world, viz: that cheap prices necessarily imply inferior articles. He thus very admirably places this subject before the public:

"Of course, in this utilitarian age, men will criticise the motives and sincerity of others who propose to work for nothing, or purely for the love they have for the rising gene-

ration; and they will be very apt to say that what is not worth paying for, is scarcely worth having.

"I presume that no one would object to free education, if it could be arranged in a practical way. But the idea of free education, as generally understood, is simply ridiculous. Some one has it to pay for, and I have yet to hear of a free school whose teachers did not receive satisfactory remuneration, either from the government, from corporations, or from the students themselves. These gentlemen may have the abstract right to do what they have done; and so I might have some sort of right to practice my profession without charge, but I should expect to have every worthy physician condemn the action as unjust to themselves, and calculated to lower the dignity of a profession which we are all equally bound to sustain. Some may say that it does not concern any particular individual. But I think that every physician ought to feel interest enough in his profession to speak out, when anything occurs which is calculated to cast a shadow over its purity or well being."

It will be noticed by many, that the name of the hospital for mental diseases, advertised on the fourth cover page, has been changed from Clifton Hall to Woodbrook. There are many who desire to obtain information upon which they can absolutely rely in regard to private institutions of such a character. To these, it may be said, that there is no institution to which unfortunate friends can be entrusted with more entire confidence than to this at Woodbrook. Dr. Given is personally, as well as professionally, known by the writer, and he will freely vouch for the whole management of the Institution, over which Dr. Given has long presided with distinction, general satisfaction, and admitted efficiency.

In the leading article in the November Journal, Dr. Frederick Dorsey, its author, states that Dr. Wm. Ragan, of Maryland, asked the consent of the family of Dr. Dorsey's

patient, that this patient might be seen by Dr. Ragan. As such a step would be wrong and injurious, it is proper to say that Dr. Ragan has sent abundant testimony to prove that such a statement made in regard to him was incorrect. It is not necessary that this testimony should be printed. It is sufficient to say that it fully exonerates Dr. Ragan from all objectionable or unusual conduct.

In a review by the editor of an admirable paper on croup, written by Dr. Fordyce Barker, of New York, it is stated that Dr. Barker confounds croup with diphtheria, and fails to recognize the pathological differences which widely separate the two diseases. Dr. Barker was charged with confounding the croup of diphtheria with croup proper; and this charge was due to the fact that this accomplished physician classified diphtheritic croup as one of the forms of croup. While all readers must have understood that the author by such classification regarded diptheritic croupal phenomena as forming in part the symptoms of one manifestation of croup, it appears that such was not Dr. Barker's intention, and that he recognizes croup and diphtheria to be entirely different diseases. In justice to him, and as evidence of the misapprehension of the reviewer, this extract is made from Dr. Barker's excellent monograph:

"The croup of diphtheria I regard as an entirely distinct and specific disease, although no distinction between the two seems to be made by Trousseau and most of the French writers. But this distinction is so fully recognized by us all here, that it is quite unnecessary for me to say more on this point, except to remark that all I have to say on the treatment of croup will have no reference to the treatment of diphtheria."

In examining this journal for the year 1870, it is discovered that there were published 1,456 pages, when there should have been published 1,344 or twelve numbers of 112 pages each. There were actually published thirteen full journals of 112 pages each. Is it not proper and just to claim

for this work what has been publicly admitted by the New York Medical Gazette and other authorities, that it is, as claimed on its title page, "The largest Medical Monthly in America?" As to its value, there is a heavy file of testimony from distinguished physicians throughout the whole country, but these opinions are never published, because it is justly regarded as coarse, vulgar, and reprehensible to do so. That the Journal is the largest medical monthly in this country is a statement that it is not reprehensible to publish; for the fact is constantly manifest, and can not be concealed. Whether the work shall be made still larger and more acceptable, is a question for its supporters to decide; they have its future, as they have had its past, under their control, and if they decide that the work, by increased support, shall be enlarged, they have only to make their decision manifest, and it shall be faithfully and promptly observed.

Histological Contribution. By H. G. Piffard, M. D., New York.

This contribution is useful and suggestive. Its object is to demonstrate the value of studying cutaneous diseases, by removing a portion of the integument, and examining this carefully under the microscope. One of the chief difficulties of this operation is the pain inflicted during the act of incision. Dr. Piffard obviates this by the use of an instrument suggested by himself. It is called by him, naturally enough, "the cutisector." He claims that it removes a portion of the integument with ease, and with comparatively little pain. Those interested can learn more in detail by addressing him at the New York Dispensary for Diseases of the Skin.

IN MEMORIAM.

The Richmond Academy of Medicine records, with profound grief, the death of their distinguished and venerable associate, Dr. Beverly R. Wellford, in the 74th year of his age. Dr. Wellford has occupied such a prominent position in the Virginia medical profession for the last half century, that it would be a work of supererrogation to recount the many important and honorable stations he has adorned.

As a practitioner of medicine and surgery, as president of the Virginia Medical Society, and the National Medical Association, and a professor in the Virginia Medical College, he has ever added lustre to the science and great practical skill to the art of medicine; while in the private circle, affable in manner, dignified in carriage, consistent in his Christian life and death, he leaves us a character worthy of all imitation. Deprived by age and increasing infirmity of participation in the active duties of practice, or the deliberations of this Academy, he yet retained to the last hour of his life a real devotion to the interests of medical science and the advancement of his profession.

Resolved, Therefore, That the Academy will attend the funeral of Dr. Wellford, in a body, and will appoint four of its members as pall-bearers.

Resolved, That the Academy will wear the usual badge of mourning for thirty days.

Resolved, That a copy of these resolutions be sent to the family of the deceased, and to the Richmond daily papers, and to the *Richmond and Louisville Medical Journal,* for publication.

HUNTER McGUIRE, M. D., *President.*

JNO. UPSHUR, M. D., *Secretary.*

THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—CASE OF INTRA-UTERINE PEDUNCULATED FIBROID TUMOR, WEIGHING TWO AND A QUARTER POUNDS, SUCCESSFULLY REMOVED. By H. P. C. WILSON, M. D., Ex-President of the Baltimore Pathological Society, and Special Surgeon in Diseases of Women to the Union Protestant Infirmary, Baltimore. Read before the Society November 18, 1870.

I would claim the attention of the Society for a little while this evening, Mr. President, in reporting a case of intra-uterine fibroid tumor. Its history, its size, the difficulties attending its successful removal, and the steps by which these difficulties were overcome, are all points of much interest, and may lend some aid to others in future operations upon similar cases.

Mrs. J. D. J., of Baltimore, (aged 43), the mother of six children, had her last child at the age of 31. Has never been pregnant since. Has never felt as well since the birth of her last child. Before, was a hearty, healthy, fine-looking woman. Has had more or less monthly irregularities since, and for the last four or five years has been subject to more or less metrorhagia all the time, and frequently to profuse hæmorrhages. At times has been subject to severe pains in the lower part of the abdomen. Her lower abdomen has been gradually increasing

in size for years; and recently she has been accused by her friends of being pregnant.

I was called to see her for the first time October 7, 1870, in consultation with Dr. McSherry. On entering the room my first impression was that the woman was in labor—pains were coming and going regularly, with the same bearing down efforts as in labor. On examining her vagina with the finger, a mass presented at the vulva in every respect resembling a child's head—having very much the same firmness to the touch—fully as large, and occupying the whole cavity of the pelvis. A little manipulation, however, together with the history of the case, satisfied me that it was an intra-uterine fibroid tumor, and I advised an operation on the following day. Dr. McSherry had made the same diagnosis before I saw her, and was most judiciously giving her ergot to assist the uterus in its efforts to expel it. While this tumor was occupying the whole of the pelvic cavity, it was found to be continuous with a tumor extending into the abdomen as high as the umbilicus; so that the abdomen looked very much like that of a woman in the eighth month of pregnancy.

We gave her anodynes that night, and agreed to meet on Saturday, October 8th, at 12½ o'clock p. m., prepared for an operation. At the appointed hour, we met with Drs. William T. Howard and William B. Griffith. The difficulties of the operation were fully appreciated by us all, and there were some doubts present as to whether we would be justified in making the attempt to remove the tumor, from the apparently insurmountable difficulties in the way, and the very grave prognosis.

At 12½ o'clock Dr. McSherry put her under chloroform, and when she was thoroughly relaxed, I attempted to work my fingers and hand up by the side of the tumor to see if I could determine its point of attachment and the nature of it. I did not succeed in getting my fingers higher up than the superior strait of the pelvis, and as far as I could explore with my hand and fingers (greatly numbed as they were from pressure between the tumor and bones of the pelvis), I could discover

nothing but this tumor extending far out of reach, and felt externally reaching up to the umbilicus.

I unhitched one end of the chain of my ecraseur; fastened a strong thread to it, and passed the other end of the thread through a Gooch's canula. I then attempted repeatedly to sweep this string around the tumor with the canula, and thus draw the chain around it, but in vain. Everything was so tight there was no room to work.

I then adjusted the chain to the ecraseur, encircled the presenting tumor with the chain, and handing the instrument to Dr. Griffith to hold in position, with two small pieces of sponge, in sponge-holders, I commenced working the chain up over the tumor, intending to get it as far as possible, and then cut away, thus clearing the way for me to get up further. After much patience and difficulty I worked the chain and the end of the ecraseur further than I could reach, and as far as I could manipulate the sponge-holders. I then tightened the chain, and had not given more than two or three slow turns of the wheel when the chain snapped.

I then took a smaller ecraseur which I had for the use of wire. Strong, steel, piano wire was adjusted to it, and with two fingers as a guide, the ecraseur was passed up on them, the stiff wire encircling the tumor as it ascended. The end of the ecraseur and wire were passed up entirely out of reach. The ecraseur was put to work carefully, at about half a turn in a minute, but had not worked long when the wire snapped.

A second time the wire was adjusted as above, and snapped. This time near the point of attachment to the ecraseur, so that it could be refastened without removing the wire.

A third time the instrument was put to work, and a third time the wire broke; and now, as before, near the point of attachment to the ecraseur. Fortunately there was a superfluous amount of wire at the other end of attachment, and by working up the screw we were enabled to secure the broken end again.

It was now 7 o'clock p. m. The patient had been under

chloroform from 12½ o'clock (six and a half hours); though under the most judicious administration of Professor McSherry, she was not kept profoundly insensible all the time. We were all thoroughly exhausted—patient, physicians, and attendants. We had not had a mouthful of refreshment since breakfast. We had worked for six and a half hours in adjusting chain and wires, to have them every time broken, and to accomplish nothing towards the removal of the tumor. Night was upon us, and with much discouragement for my unsuccessful efforts, I tightened the wire ecraseur sufficiently to thoroughly constrict the tumor without running the risk of breaking the wire again, and left it thus for the night.

A liberal supply of nourishment was ordered, and afterward a full anodyne; and we parted to meet at 9½ o'clock on the following (Sunday) morning.

October 9th. We met this morning as arranged. Patient had slept well through the night, and taken a goodly amount of nourishment. Dr. McSherry had paid her an early visit to draw off her urine; for it should have been remarked before that so completely did the tumor fill up the whole pelvis and press upon the bladder and rectum that she could neither urinate nor defecate.

I had gathered in a number of ecraseurs from my friends; but not one of them had a chain long enough to encircle the tumor. The wire stores and instrument-makers' shops were all closed, and these sources of possible supply were cut off. I went to the operation this morning with the same wire and same ecraseur as yesterday. In revolving the case over in my mind during the previous night, I had determined to attempt to remove the tumor in one of three ways:

First.—With the ecraseur and wire, which was already encircling and well constricting the tumor, and which I hoped, after remaining so many hours imbedded in the tumor, and partially mummifying and softening the tissue within its grasp, would be able to cut through the mass which had so often broken it before.

Secondly.—In case this plan failed, I proposed to introduce Sim's speculum, pull back well the prinæum, and carefully dissect out the tumor till I had removed all in my reach, and thus clear the way for introducing my hand, and getting at that portion which was far above the brim of the pelvis, and especially at the pedicle, which I felt sure I should find. I did not fear hæmorrhage much in case I should resort to this procedure; because of the great density of the tumor; because of the frequent constrictions to which it had been subjected during the previous day, and which must greatly have crippled its circulation in the portion which I proposed to remove by dissection; and because I intended to use the wire and ecraseur as a tourniquet.

And thirdly.—If baffled in these two plans, I proposed to apply Simpson's cranioclast to the tumor as far up as I could work the blades, and mash it into a soft, pulpy mass, and so reduce its size as to enable me to pass my hand up to the pedicle, and remove it with a wire, which would easily cut through such softened and devitalized tissue.

At 10 o'clock she was placed on the table, and Dr. McSherry very soon had her well relaxed with chloroform; Drs. Howard and Griffin lending me valuable aid. I passed the index and middle fingers of my left hand as far up as I could possibly work them between the tumor and sides of the pelvis, but could nowhere reach the end of the ecraseur or constricting wire. My hand and fingers were greatly numbed from pressure. On withdrawing them I put the ecraseur to work by turning the screw very slowly and gently. I had made very few turns, when the wire broke for the fourth time near its attachment to the screw of the instrument.

We now requested the friends of the lady to retire from the room; and I proposed to adopt the second method indicated above—viz., to patiently dissect out per vaginam all the tumor I could reach; and being sustained in my views by the majority of the gentlemen present, I proceeded without hesitation.

I again succeeded in attaching the wire to the screw of the

ecraseur without removing it, and then tightened it sufficiently to produce thorough constriction without running the risk of breaking.

With Sim's speculum inserted, and the perinæum held well back by Dr. Griffith, I cut directly into the centre of the tumor with a straight pair of scissors, and with scissors of different curves removed piece after piece till I had entirely cleared the cavity of the pelvis, and reached the point where the wire constricted the tumor above the brim of the pelvis. I removed in this way *sixteen ounces* of the tumor, to say nothing of the blood and small pieces, which we could not collect for weighing. The amount of hæmorrhage was very small—certainly not over *an ounce*. We did not dissect too closely up to the constricting wire, lest it should slip off and frustrate our design of leaving it as a safe-guard against hæmorrhage, till we proceeded further for the removal of the abdominal portion of the tumor. We finished this portion of the operation at 1½ o'clock, the patient having then been three and a half hours under chloroform. We were now very much fatigued after the six and a half hours of the most exhausting work yesterday. We were unprepared with proper ecraseurs just then to attack that portion of the tumor above. The patient was much exhausted after being six and a half hours yesterday, and three and a half hours to-day, under chloroform. Pressure on the bladder and rectum was removed, so that these organs could perform their natural functions. We applied a pledget of lint soaked in a solution of carbolic acid into the vagina against that portion of the tumor remaining. Gave the patient nourishment during the afternoon and evening, and an anodyne at night; and met again at 9½ o'clock the next morning. October 10th I sent to New York for Chassaignac's ecraseur, with Sim's porte-chain, to be forwarded me by express, as there was not one to be had in this city.

October 10th. The patient had passed a good night, taken abundance of nourishment, and emptied her bladder per viam naturalem. We introduced the speculum, removed the pledget

of cotton, and dissected away with scissors some loose portions of the tumor. Washed the vagina out with tepid water, and replaced lint soaked in a solution of carbolic acid, and left her till the next day. Professor McSherry saw her several times each day, and gave skillful attention to her general treatment.

To-day I got Mr. Fowler (worker in wire), of this city, to test the strength of the different wires to be used with the ecraseur in place of the chain. The steel piano-wire was altogether too brittle and too stiff to be well manipulated. He tried a single strand, a rope of two strands twisted, and a rope of four small strands twisted—all just small enough to pass through the eye of my chain ecraseur. He found the four-strand small iron-wire rope (such as I exhibit) to be the strongest and most easily manipulated—stronger and better than either steel or copper wire. I provided myself with such a rope for completing the operation to-morrow, in case it was considered best to proceed at once, and my ecraseur and porte-chain should not arrive from New York.

October 11th. We met to-day at 12 o'clock. The patient had a good night, but felt so much exhausted that she begged we would not give her chloroform nor disturb her to-day. My ecraseur had not arrived, and I was very willing to wait till to-morrow, hoping for its arrival. She was kept very quiet and well sustained. I had not yet passed my hand up to the pedicle. I did not know what difficulties I should encounter when I got my hand in the uterus, reaching, as it did, up to the umbilicus; and I desired to have every facility at hand for any emergency that might arise.

Wednesday, October 12th. We met to-day at 10 o'clock. Patient much brighter and stronger than yesterday. She was placed under chloroform by Dr. McSherry while lying on a table in the dorsal position—thighs flexed on abdomen and legs flexed on thighs, and supported by Drs. Howard and Griffith. The ecraseur and wire encircling the tumor just above the point to which I had dissected were tightened, and came away with a small portion of the tumor attached without much resistance.

My arm being bared, my left hand was well oiled, and passed

without much difficulty up to the fundus uteri, where I discovered the tumor attached by a short, thick pedicle about two inches in diameter. My chain ecraseur (with a four-strand iron rope substituted for the chain) was passed up on the palm of my hand till the distal end of the shaft reached the fundus uteri. The hand was then partially withdrawn, while the shaft was held firmly against the fundus. The fingers thus freed, were enabled to work the wire rope over the tumor so as to encircle the pedicle. The wire had previously been bent at an acute angle with the shaft. The wire was then tightened over the pedicle by turning the screw of the ecraseur while my hand remained in the uterus to ascertain that the pedicle was constricted, and not the body of the tumor. When this was accomplished, the hand in utero was removed, and a few turns of the screw caused the wire to cut through the pedicle, and the balance of the tumor was speedily removed by a pair of strong forceps.

There was no hæmorrhage. I am sure one ounce of blood would have covered the whole amount lost from beginning to end of the operation.

The remaining portion of the tumor removed to-day weighed fifteen ounces, so that with the sixteen ounces removed by dissection four days previously, we have by accurate weight a pedunculated intra-uterine fibroid tumor weighing thirty-one ounces. Fully five ounces in blood and small fragments, which were lost in dissection on the first and second days, would have brought the tumor up to two pounds and a quarter.

Chassaignac's ecraseur, with Sim's porte-chain, did not arrive till the day after the operation was completed. Had it been on hand I could not have used it, for the chain could not have been expanded sufficiently to embrace the tumor.

The patient was under chloroform six and a half hours on the first day of the operation, three and a half hours on the second day, and two hours on the third day—making in all twelve hours. She took in all fourteen ounces; and of this amount eight ounces were taken on the first day. The admin-

istration of chloroform was skillfully managed by Dr. McSherry. The patient was never allowed to return sufficiently to consciousness to frustrate the operator; and yet from time to time she was allowed to return to semi-consciousness during the less painful manipulative steps.

The difficulties of this operation far exceeded anything in my experience. None but the operator in such a case can appreciate what he has to encounter.

The after treatment consisted in washing out the uterus once daily for several days with tepid water and a weak solution of carbolic acid, and afterwards with simply tepid water. There was not much suppurative or sanious discharge. The uterus rapidly contracted, and the abdomen returned to its normal size.

I saw her but a few days after the operation, and she was then handed over to Professor McSherry for after treatment. Professor McSherry informs me to-day, November 16th, that she has continued to do well since I left her. She has now entirely recovered. She had no unpleasant symptom after the operation.

I do not remember a case reported of the successful removal of a larger intra-urine fibroid tumor.

ART. II.—BLOODLETTING AS A MEANS OF PROMPT RELIEF IN SOME CASES OF PENETRATING WOUNDS OF THE CHEST. By WM. R. WHITEHEAD, M. D., of New York. Physician for Diseases of Women at the Northwestern Dispensary—Fellow of the New York Academy of Medicine—Member of the New York Pathological Society, etc., etc.

The paper by Dr. Fordyce Barker on "bloodletting as a therapeutic resource in obstetric medicine," recently read before the New York County Medical Society, and published in the New York Medical Journal, prompts me to offer some remarks on a mode of treatment that has fallen into general disrepute.

It is fortunate that an attempt to re-enlist the interest of

medical men in the subject of venesection was made by one so thoroughly competent and so much esteemed as this distinguished gynæcologist and professor in the Bellevue Medical College. Indeed, occasionally, there is needed just such a prominent example as that offered by the valuable paper of Dr. Barker to call forth the expression of others on some particular practice, which, from its abuse, has met with great disfavor.

During the Crimean war, and when I was but little out of my "teens," I was a surgeon within the beleaguered city of Sebastopol, and had the good fortune to possess a copy of Dupuytren's Treatise on "blessure par armes de guerre." No part of this surgeon's work on gunshot wounds was read by me with more attention than that which relates to penetrating wounds of the chest. The advice which he has given, that a patient wounded in the chest should be bled as frequently as his strength and the gravity of the symptoms require, is additionally insisted upon in some interesting foot notes (in small type) added by the editors to Dupuytren's work.* These notes allude to some strictures by John Bell on the management of a case of sword wound of the chest reported by Ravaton. "At one time the sense of suffocation and distress was extreme, and the sufferer lost his voice. He was bled five times within three hours, and subsequently venesection was several times repeated. The great loss of blood by venesection brought on a condition of stupor, in which he remained for two days.

"The dyspnœa left him, and he regained strength with the aid of nourishing soups. The cough, fever, and copious perspiration gradually diminished; and on the twenty-second day he was discharged cured—only a little weak and pale." The editors remark: "We ask every impartial reader what was there to blame in Ravaton's management of this case?"

It was not long before an opportunity was presented to test the value of bloodletting in cases of wounds of the chest. At one time there were in my ward, in Fort Nicholas, eleven

* Op. Cit., vol. 2, p. 329. Paris, J. B. Bailliere, 1834.

patients with gunshot wounds of the chest. Each of these patients was bled a number of times, and at each time with more or less marked relief of a very distressing dyspnœa. During the ten or twelve days that these patients were under my care, not more than two of them, so well as I recollect, died, though some of them were in a very critical condition. One night a large number of soldiers, who had just been wounded during a "sortie," were sent to the fort, the casemates of which were used for a hospital. Every available space was occupied by wounded men. On the following morning an order was received to remove all sick and wounded men, previously in the fort at the time of the arrival of the new-comers, to the north side of the harbor of Sebastopol. Consequently I lost sight entirely of most of those cases of gunshot wounds of the chest which so particularly interested me. However, I was quite impressed with at least the temporary advantage of bleeding from the arm to arrest apparently imminent suffocation, which occurs in patients wounded in the chest. I continued occasionally to resort to venesection in such cases, and generally with the temporary benefit which attended my first experiments. After the Crimean war, and during five years that I was at Paris, and was an "eleve des hopitaux," I was frequently ordered to abstract blood for different inflammatory disorders. Besides, Bouillaud, who was well known for his "*saignee coup sur coup*," was an examiner at two of my examinations for the doctorate, and I felt quite sure to be searchingly questioned about bloodletting. Who, under like circumstances, would not think favorably of venesection?

During our civil war I was a surgeon in the Confederate army, and had opportunities to repeat my Sebastopol bloodletting experiments, but there were then seemingly good reasons to oppose their repetition. Dr. Hughes Bennett's arguments* against bloodletting were fresh in my memory, and the tidal wave of opinion in this country against venesection overtook

* Lectures on Clinical Medicine.

me soon after my return from Paris, and influenced my treatment during our civil war.

I have since been disposed to reconsider the subject of bloodletting. I am inclined to believe that it will regain its place in professional favor, and that the lancet will again ornament in a conspicuous manner the armamentarium of the surgical instrument-maker.

By those who at present use the lancet, I believe that the indications for venesection are better understood than they were formerly.

Those who have no experience with it will not at first readily comprehend its utility, especially in view of the numerous remedies which at the present day take the place of bloodletting. It is not, however, my purpose in this brief article to endeavor to point out the different indications for venesection; but I desire simply to reiterate a fact which has been frequently observed and mentioned by others—*i. e.*, that prompt relief may be given, and I believe life frequently saved, by the sudden abstraction of blood from the arm in cases of dyspnœa caused by penetrating wounds of the chest. The sudden withdrawal of blood as an urgent expedient to stay a threatened attack of apoplexy of the brain or lungs is a practice for which I would hold in reserve the lancet. There are other indications for bloodletting, some of which were well stated by two or three of the gentlemen who took part in the discussion of Dr. Barker's paper; but Dr. Jacobi judiciously expressed by the following questions views that I share with him. He says: "We cannot ask ourselves what will become of the patient next week? How much time will he require to get well? "We should ask, Will the patient live for half an hour if we do not resort to venesection?"

Such are the considerations which, I think, should determine us to use the lancet, even should it be required to give stimulants immediately after its use.

ART. III.—THE "NASAL DOUCHE" IN THE TREATMENT OF NASO-PHARYNGEAL CATARRH, WITH REPORT OF A CASE OF RUPTURE OF THE DRUM OF THE RIGHT EAR. By WM. H. DOUGHTY, M. D., Prof. Mat., Med. and Therapeutics in Med. College of Georgia, Augusta, Ga.

The addition of this useful invention to the ordinary and hitherto insufficient resources of the profession for the management of chronic disorders of the nasal cavities is justly esteemed a triumph over difficulties. The application of a physical principle so simple at once placed at our disposal an apparatus so easy in its employment, and so thorough in its operation, that until recently its efficiency and safety were never questioned. Whatever restrictions may hereafter be imposed upon its use by professional sentiment, it will not be denied that the management of catarrhal affections of this portion of the respiratory tract has been completely revolutionized, and their incurable element, arising chiefly from the inaccessibility of the interior parts, to a great extent, removed. Those injuries now recognized as incident to it will have the effect of ensuring greater care and caution in the selection of cases to which it may be adapted, but cannot determine the question of its abandonment except for such individual cases alone.

The accidents to which we refer—serious in their nature as endangering the integrity of so important and delicate an organ as the ear—have even prompted the charge of inefficiency in cleansing the nasal passages, based upon the asserted impracticability of discharging a current of water or other fluid, with certainty, through other portions of the nasal cavity than the floor or most inferior part,—the upper and more hidden portion being inaccessible and not traversible by it in the ordinary catarrhal conditions.

However narrow the spaces between the septum in its entire extent and the turbinated bones (the most prominent and projecting objects) situated on the outer walls of the cavities, the practicability of discharging fluid through them in the normal state will scarcely be denied. A simple inspection after

illumination of the region is sufficient to satisfy any inquirer.

What obstruction is interposed by catarrh of the mucous membrane to prevent this successful injection or washing out of the entire region? Obviously, it can arise from two causes only—namely, from chronic thickening of the mucous structure, or from the retention of viscid secretions made more difficult of removal by the increased narrowing or diminution of space induced by said catarrh. Chronic catarrhs are characterized by abundant muco-purulent secretions, which, by retention, readily concrete, forming even cylindrical casts of the more pervious portions of the nasal cavity—their retention and decomposition being a fruitful source of the extreme offensiveness of some cases. Even where the lower channels (floor and inferior meatus) are kept clear by voluntary efforts of the subject, the upper regions are occluded by said secretions in smaller quantity, not always removable by even the most powerful sternutatory efforts. That this is the real cause of obstruction to respiration, and not simple alterations in the thickness of the lining membrane, in most cases, we entertain no doubt; for as long as the nares can be kept clear of the discharges, or empty, the subject can blow through either or both nostrils with comparative ease; and to this is to be attributed the immediate and marked change in such cases produced by the nasal douche when properly used. The tenacious secretions are then the chief sources of occlusion, and any crevice or sinuous passage of the part occupied by them can, from the necssity of the case, be occupied or traversed by less viscid fluids upon their removal. The process of nasal irrigation secures their removal by the force of the current employed, and prompts their subsequent collection and retention by frequent occupation of the channels and interspaces. This admitted, the theory of its efficiency as a radical cleanser of these passages is fully sustained.

In the issue of the New York Medical Record of Feb. 1st, 1870, will be found a very interesting article by Dr. Chas. I. Pardee, Clinical assistant at the Manhattan Eye and Ear Hospital, upon the "Danger attending the use of the Nasal Douche;"

in which the charge of inefficiency is made, first, based upon the impenetrability of the middle and upper parts by reason of the thickening of the mucous membrane. We are greatly indebted to him for the note of alarm sounded as to its dangers, and, as the subjoined case shows, have unhappily verified one of the accidents (rupture of the drum) to which he alludes. But while he has proved by the citation of clear cases most incontrovertibly the dangerous results that may follow, he has failed to sustain the other point made. Lest the latter should derive undue weight, and receive, perhaps, the tacit approval of the profession—from mere association in the same paper with admitted dangers—the statement of its inefficiency deserves re-examination.

He says, after particularizing the proximity of the turbinated bones and septum, "but in naso-pharyngeal catarrh the mucous membrane covering the septum and turbinated bones is thickened, and *in consequence the opposite surfaces are pressed together.* If, by means of our instrument, a gentle stream is passed into the nostril, the open space at the floor of the passage will be traversed; but that above, exterior to and between the turbinated bones, will be untouched by the fluid. If we increase the pressure by elevating the reservoir, the mechanical irritation will cause a determination of blood to the part that will temporarily increase the thickening of the mucous membrane, and render the above-named spaces only the less pervious to the passage of the fluid. In either case the object of the thoroughly cleansing or of introducing remedial agents into the passages will be partially defeated. It is true that a little of the fluid may insinuate itself between the turbinated bones, or into the upper nasal space, but so little as to be of practically no use; and if much pressure is used it is more than likely to cause a severe headache. It is but the floor of the nasal passages that the operation can thoroughly reach."

If it be true that "the opposite surfaces are pressed together," the conclusion is irresistible that nasal irrigation is impossible to the extent claimed. But is this true of chronic naso-pharyn-

geal catarrh? We think not. When the secretions are removed, simple inspection shows that the turbinated bones (you cannot see distinctly beyond the middle one) are not in direct apposition with the septum. Does not the clearness of the nostrils after removal of liquid or concrete obstructions show the perviousness of the several channels of the nostril? Is not the sense of entire clearness of the nostrils experienced most comfortably by the patient good evidence of an open state of the whole cavity? Does not the sense of smell still usefully retained indicate access of air to parts above (where the olfactory nerves are chiefly distributed)? May not fluid gently forced traverse all parts entered by the respired air?

We are satisfied that the occlusion (its degree and cause) here specified does not exist in a large majority, if indeed any, of these cases of catarrh. In the chronic stage the passages may be claimed to be pervious to air and fluid when free from the presence of obstructing secretions. And it is only in intensely acute catarrhs produced by iodic, syphilitic or other causes that perfect occlusion occurs from simple swelling of the parts: the distress of the subject under these circumstances of embarrassed nasal respiration is in striking contrast with that of the chronic state. In the latter, it will require a stronger obstacle than muco-pus, however concrete or viscid, to prevent the occupation of every part by the fluid gently insinuated by this continuous current.

Moreover, if it can be shown that "other means of cleansing and of introducing remedial agents into the nasal passages are equally efficacious," we are prepared to entertain most seriously the question of the abandonment of the nasal douche. A sense of duty would compel us to adopt the safest; because, where two methods of treatment, or kinds of appliances, equally efficacious, are at command, duty, and not mere preference, must determine which shall be used. Unhappily, in this instance, we have no such choice; for few will agree with him that a "posterior nares syringe will accomplish all that can be expected from the nasal douche," to say nothing of the greater inconve-

nience and difficulty involved in its employment. All syringes are partial, and as insufficient now as the vexatious experience of the profession has always shown them to be.

Nor can we concede that the atomizer is more than a useful auxiliary, particularly for the application of certain remedial agents (as nitrate silver or other articles to be used in small quantities). If the "opposite surfaces are pressed together" the nebulized fluid can no more enter the upper nasal space than the continuous current of the douche, and if simply occupied by secretions there would be lack of force in the spray to overcome any material obstruction. A certain degree of force or pressure is necessary to the thorough renovation of the nasal cavities, which is only secured by the nasal douche in the uninterrupted flow through both nostrils—the return current or reflux being equal to the direct one, thereby cleansing both at the same time. Nothing can exceed the simplicity of this invention or offer greater facilities for the performance of the act of cleansing or purification of the part. That it is disagreeable is merely admitting what is true of all appliances contemplating the application of fluid substances within the nostrils; that danger of injury to the ear attaches to its use is equally true, but does not warrant the abandonment or condemnation of the instrument until something safer and more efficacious (because safer) is presented. Huffishly to cast aside all mechanical appliances that involve even serious risks in their use will greatly restrict our resources—rather let us, until *certain* improvements are within reach, throw around them every safeguard, taking all reasonable precaution to prevent injury or accident. Exceptions to the safe employment of the nasal douche are rare. Let us, therefore, hesitate to discard it.

In the following case, the publication of which is the moving consideration in the preparation of this article, we attribute the accident to the carelessness of the subject, believing it the result of the *accidental inclination* of the head to the right side, and the unnecessary pressure of the column of fluid determined

by the elevation of the basin. To insure safety, we think three things should be insisted upon—to wit:

First.—*Oral respiration*, with the mouth wide open.

Second.—The *lowest pressure practicable*, to be secured by placing the reservoir at the *lowest level* necessary to secure the current.

Third.—The *position* of the subject, which should be leaning forward in the sitting posture with the head perpendicular to the plane of the surface or vessel intended to receive the escaping fluid. Inclination to the right or left would favor the passage of the fluid into the eustachian tube.

Mrs. K——, aged twenty-five, of delicate constitution, the subject of naso-pharyngeal catarrh for twelve months or longer, under our direction began to use the "nasal douche" on the 17th of October, being directed to wash out the nostrils twice daily. It was subsequently reduced to once daily, and used regularly and satisfactorily until October 30th, when her husband called at the office to report that during its use that morning water had escaped from the right ear, preceded and accompanied by decided pain and a sense of fullness about the ear; pain gradually abated, lasting until the evening. Hearing confused and indistinct, but deafness not marked.

He was instructed not to use it again until I saw the patient. At 9½ A. M., 31st October, visited Mrs. K——, eliciting the following facts: She makes no complaint of the ear or of deafness—simply feels "funny" (as she expresses it) when attention is directed to the organ. States that she used the *douche* carelessly by stooping forward over the chimney-place with the head inclined to the right side (which, she thinks, was the immediate cause of the accident), the nozzle of the instrument occupying the left nostril, and the reservoir being placed upon a high mantel-piece. Her awkward position caused her to strangle by some of the water escaping into the pharynx, at or about which time she felt the escape of water from her ear.

She was ordered to discontinue it for the present. November 4th visited patient. Says she has experienced no inconvenience

from the accident further than the conscious, audible escape of air from the ear on one occasion when blowing the nose. No pain nor disordered sensations. Hearing good, and states moreover that two days since she resumed the use of the douche, employing it daily not only without the recurrence of the accident, but with ease and comfort.

She was, however, directed to desist for a week longer from its use, in order that all injury sustained might certainly be repaired.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—ON SUCCESS IN VACCINATION. By FRANK P. FOSTER, M. D., House Physician to the New York Dispensary.

The success or failure of a given attempt at vaccination often has much to do with the repute of the practitioner, and what is of far greater importance, not infrequently determines whether or not one or more children are to undergo the terrible infliction of small-pox; and thus it may become an affair of life or death. Viewing the matter in this light, it is the duty of every practitioner to make himself familiar with the elements necessary to success in the operation. I am not aware that any of our medical schools afford to the student anything approximating to adequate instruction in this branch of practice; but, on the other hand, I am very well convinced that the great majority of physicians commence practice without the most distant idea as to the conditions which most conduce to successful vaccination, and that, unfortunately, many of them complete their career without materially adding to their stock of knowledge in regard to this subject. Failure in a given instance is for them proof, either (1.) of the child's insusceptibility, or (2.) of the worthlessness of the vaccine.

As to insusceptibility to vaccinia, the simple truth is, that it is extremely rare, and its existence in a given case should be admitted only after the most persevering endeavors to achieve success. As far as my own experience goes, I have, in about ten thousand vaccinations, met with only one child whom I considered really insusceptible, and I am by no means satisfied that even in this one case such was the fact. Even the temporary insusceptibility noticed by Jenner, and various subsequent writers, and referred by them to the existence of eczema and other cutaneous eruptions, is quite rare. Marson* states, and every practical vaccinator will bear witness to his moderation, that in vaccination by the arm-to-arm method failure should not occur more than once in a hundred and fifty cases. His own rate of success was much higher than this. This proves the rarity of insusceptibility, and also establishes a standard rate of success in primary arm-to-arm vaccinations.

Unfortunately in private practice, and for the most part in dispensary practice, too, in this city, we find ourselves obliged to vaccinate almost entirely with stored virus, and therefore we must establish another standard of success, inasmuch as vaccination with stored virus is much less successful than that done by the arm-to-arm method. It is safe to say that with good stored lymph, which has been carefully stored, and not kept too long, the proportion of success should be as high as 75 *per cent.* Is this rate of success usually attained in private practice? I think not; and I think that the failure to attain it is too often imputed to lack of freshness of the vaccine. I am in the habit of constantly furnishing vaccine to physicians, and not unfrequently hear complaints that with a certain specimen of vaccine they have failed of success, and that therefore the vaccine must have been kept too long. I am in the habit of using my oldest virus, and disposing of my freshest to practitioners; so it happens that in case of such complaints I have

* Medico Chirurgical Transactions, vol. xxxvi., quoted by Seaton, Handbook of Vaccination, London, 1868, p. 160.

almost always been able to show the record of successful employment of any given specimen of virus, *made at a time subsequent to the day on which I had given out virus of the same specimen*, and in regard to which it had been alleged that failure was owing to want of freshness.

Feeling that this fact should be made known to the profession, I have taken pains to tabulate the results obtained in the first one thousand vaccinations done by me at the New York Dispensary during the present year, so far as they were inspected, with the age of the lymph used. The lymph was dry-stored on quills, and there was no unusual effort at preservation—nothing beyond covering each quill with tin foil, and keeping it dry and moderately cool.

All public vaccinators are aware that where the opportunity for inspection depends on an ignorant population the results are much more favorable in those cases not returned for inspection than among the few whose parents have a sufficient sense of duty to return with them. My table, as far as it goes, is in strict accordance with the results generally obtained at the dispensary, and must go far towards proving that very few of the failures met with by practitioners are really due to their lymph being too old. For my own part, I would rather vaccinate with a specimen three weeks old, and which I knew to have succeeded in previous trials, than with another specimen twenty-four hours old, concerning the activity of which I knew nothing. Fresh lymph from different sources possesses very various degrees of activity, and my experience is, that a specimen which succeeded when very fresh will also succeed very nearly as frequently at any time within three weeks if properly stored and properly used. In other other words, lymph depends more on its source than (within certain limits) on its age.

Vaccination with the crust is, as a rule, much less successful than that with lymph; but, as in the case with the latter, age after "quilling" (within the same limits) is of little consequence.

As regards capillary tubes of lymph, I never use them, as they are very unreliable for ordinary use, and should be pre-

pared only for transportation to long distances. What little energy is possessed by lymph stored in this way is not at all impaired by the lapse of time, and scarcely by exposure to light and ordinary temperatures. They have been successfully used after having been kept seven years, and perhaps longer.

It is not intended that the reader should gather from the above remarks that it is not *desirable* to use as fresh vaccine as possible; my aim is only to show there are more important elements of success in the performance of vaccination. The element of the very greatest importance is the skill of the vaccinator. For the benefit of those who are not so circumstanced as to be able to attain skill by witnessing the daily work of a public vaccinator, a brief description of the method, which the writer has found most effective, may not be out of place.

The operation of vaccination consists essentially of two proceedings—viz., the formation of an absorbing surface on the child's arm, and the application thereto of the virus so prepared as to facilitate its absorption as much as possible.

I. *The Preparation of the Arm.*—It is customary to vaccinate on the left arm, for the reason, chiefly, that in nurslings it is less exposed to accidental abrasion than the right arm is. The point of insertion of the deltoid muscle is the place of election; if we do not choose this precise spot it is advisable to go a little lower, as thus the vesicle will be in less danger of friction by the child's clothing. If the vaccination is to be by puncture, four punctures should be made at a distance of at least half an inch from each other. The puncture should be valvular, the point of the lancet being insinuated for a short distance between the epidermis and the derma. A common lancet is the best instrument for this purpose, and should be carefully cleansed after each operation. The method by puncture is not considered so likely to succeed as that by scarification. The vesicles are, however, usually small, and are therefore more likely to yield characteristic crusts, or, rather the crusts are less likely to be injured, and so present a finer appearance after falling off.

I regard the operation by scarification, as it is called, as preferable for various reasons. It may be more quickly performed, generally causes less pain, and produces larger vesicles, from which, if no mishap befall them, an abundance of lymph may be obtained. The scarificator generally used is that known as Tiemann's, and consists of six or seven steel points in a row about as far apart as the teeth of a moderately fine comb. A very good instrument for the purpose may be improvised by piercing a cork with a row of common sewing-needles, but the one which I prefer is one of my own device, a description of which will be found in the American Journal of Syphilography and Dermatology for January, 1871.

Whatever scarificator be chosen, make two absorbing surfaces distant at least an inch from each other. This is to be effected by drawing the instrument lightly and rapidly over the skin made tense by the thumb and fingers of the left hand. A straggling scarification is often the result of neglecting to steady the hand by resting the point of the little finger against the child's arm. The motion of the instrument should be free and of a sweeping character, such as draughtsmen use in shading with a lead-pencil Having made one set of parallel scratches, cross them in the same manner. Anything which may be called a *flow* of blood is to be avoided, but one need not be exercised about a slight appearance of blood; indeed, I like to see the scarified patch present a uniform red surface—the redness of *blood*, not that of *irritated skin*. The idea has become very generally diffused that in vaccination no blood should be drawn, and our patients sometimes estimate our expertness by the rarity with which we draw blood. This idea is very ill-founded. The appearance of blood is a positive advantage so long as it does not trickle beyond the limits of the scarified patch. It soon dries over the implanted virus, and forms the very best sort of protection against the accidental wiping away of the virus. Yet there are some children who have full-blooded skins, and in whom the scarification should be done with unusual care, lest too much blood exude. Skins of this sort can always be

readily distinguished. They are of a warmer hue than usual, and often present an excessive thickness of epidermis with a slight roughness.

The two methods above described are the only ones which I consider are to be recommended; and of the two, I decidedly prefer the method by scarification. All patent or complicated instruments for vaccination should be sedulously avoided on all occasions. I advise four punctures, or two patches of scarification, in order that a certain *amount* of efflorescence may result—Marson's statistics having apparently demonstrated that the degree of immunity from small-pox is in direct proportion to the degree of vaccinal development.

II. *The Preparation and Application of the Virus.*—These will depend upon the form of virus which is to be used.

(1.) In the arm-to-arm method, which is always to be preferred, having prepared our absorbing surfaces, the vaccinifer's vesicle is to be cleansed with a bit of soft rag moistened in warm water, and gently passed over it. The vesicle is then to be opened at numerous points along its border with a clean sewing-needle, care being taken not to wound its floor. At each puncture a drop of clear lymph should issue forth. These should be taken off on the point of a *clean* lancet and inserted into the punctures on the child to be vaccinated, or well rubbed into the scarified surface with the side of the lancet point. After once applying the instrument to the "vaccinee," it should on no account be again appplied to the vaccinifer's vesicle until it has been *thoroughly* cleansed.

(2.) In regard to vaccinating with fluid lymph stored in capillary glass tubes, the first thing to be said is, do not expect to thoroughly vaccinate more than one child with the contents of a single tube. It never contains more pure vaccine than is desirable for the purpose, although an admixture of glycerine may make it appear otherwise. The presence of a certain quantity of glycerine does no harm, except to mislead the practitioner as to the quantity of vaccine with which he is to work. On the contrary, while I do not think it has, of itself,

any preservative effect, it may prevent impairment of the lymph by the heat necessary in sealing the tube provided the glycerine be made to enter after the tube has been charged with vaccine. The fluid in a capillary tube will generally be found situated near one end of the tube. Observe *which* end. Break off both sealed ends, apply the end which does *not* contain the vaccine to the lips, and blow out the contents on to a clean glass or porcelain surface, or directly on to the point of the lancet. Then proceed as in the arm-to-arm method. If the lymph be stored in a fluid state between plates of glass, the plates are to be separated, and the lymph lifted off on the point of the lancet and applied in a similar manner.

(3.) Vaccination with dried lymph is the method in most general use in New York. The lymph is stored on quill or ivory slips, commonly called points, although usually it is the square-cut end of the quill (and the convex surface) which is coated with the virus. These slips should be kept dry and cool until they are used. At the time of using them, having made the scarifications, slightly moisten the charged end of the quill with pure water an instant before using it, and then rub it smartly for a minute or more on the scarified surface. Use a fresh quill for each patch. If the operation be by puncture, use quills charged at the *point*, insert the point into the puncture, and allow it to remain there for ten minutes, gently moving it to and fro occasionally. After having been used once, a quill should always be thrown away.

(4.) Crusts are highly esteemed by many physicians, and it must be confessed that if a crust be once successful, it will, if carefully used, continue to furnish satisfactory results. The general opinion of experienced vaccinators is, however, decidedly in favor of dry-stored lymph, provided stored virus of any kind is to be used. After the impervious envelope of a crust has once been opened, do not seal it up again for future use. If all the vaccinations can be done at one sitting, the best method is to reduce the crust to a powder with a knife-blade on a glass or porcelain surface, and then work into a paste with water. Do

not use glycerine, as thereby the drying of the scarified surface, after the paste has been applied, is interfered with, and the protection afforded by the first incrustation of blood rendered nugatory. The paste, prepared in the above-described manner, should be applied plentifully, and in the same manner as that directed when speaking of lymph. If the crust is to be used for more children than can conveniently be vaccinated at one sitting, it is advisable to charge quill slips with the paste made by mixing the powdered crust with water. Do not use glycerine, for then the quills will not dry, and the charge will be very liable to be accidentally rubbed off. And do not use too much water, otherwise the paste will be too thin, and putrefaction will take place before drying is complete, in which case very disastrous results may be produced. Well prepared, a quilled crust will retain its energy as long as quilled lymph, but this proceeding should be adopted only by those who have had considerable experience in the practical details of vaccination. The quills thus charged are to be used in the same manner as quills charged with lymph, and equally with these latter should be kept dry and cool until used.

Whichever of the above-described methods of operating be chosen, after the operation is finished the arm should be kept perfectly bare, and in such a position that the exuded blood may dry, instead of trickling away, for a sufficient length of time to allow of absorption (generally about fifteen minutes), before the arm is covered. No sticking-plaster or anything of the sort should be applied, as whatever goes on must come off on the eighth day to allow of inspection; and the process of tearing off a piece of plaster from a vaccinal vesicle is anything but agreeable, to say nothing of the risk of injuring the vesicle. Even if removed at an earlier period, erythema will, very likely, have been produced.

On the eighth day the arm should be inspected, and if no appearance of success be found, the operation should be repeated on the same arm, but not at precisely the same point. But there may be present at this time an imperfectly developed

efflorescence not sufficient in amount to confer the maximum of protection against small-pox, but enough to have exhausted the local receptivity.* Under these circumstances, it seems advisable to repeat the operation on the opposite arm.—*American Journal of Obstetrics.*

ART. II.—INSTRUCTION OF THE INSANE. By W. H. LATHROP, M. D., Professor Physiology and Psychology in Detroit Medical College, and Medical Superintendent of Michigan State Retreat for the Insane, Detroit.—*Detroit Review.*

At the Convention of the Association of Medical Superintendents of the Insane held at Hartford, Conn., June, 1870, "Dr. Barstow read a paper on the 'Sytematic Instruction of Asylum Patients' in schools and classes, which, as a means of treatment and mental improvement, had never been, so far as he knew, incorporated into the daily routine of asylums in America. The Doctor gave a very interesting account of his visit to the Richmond District Asylum near Dublin, where the experiment of teaching lunatics and idiots the simpler, and in some cases the higher, branches of learning has been in successful operation since 1855. There are 900 pauper insane there. At first some of the wards were converted into schools, but the accommodations have been increased, also the number of teachers, and besides reading and writing there is a curriculum like

* The existence of a local, as distinguished from a systemic, vaccinal receptivity, is not fully proved, and the matter needs further study. The conjecture is founded on a presumed analogy with what the practice of so-called syphilization has shown to be true in regard to the receptivity of virus made use of in that practice. It can do no harm, and may be of great benefit to act in accordance with the advice given in the text.

that of the best schools in the kingdom—including mathematics, mechanics, geography, drawing, book-keeping, etc. The pupils are arranged in classes and divisions (old and young) according to capacity and proficiency. Object teaching is found to be especially adapted to arouse the attention of the patients. There are also rhetorical and dramatic entertainments and drills military and gymnastic. The school-day begins at 9½. Fifteen minutes are occupied in a thorough inspection of the pupils as to cleanliness. From 9½ to 10½ teaching in all branches; 10½ to 11 singing and calisthenics; 11 to 12 out-door games and in-door amusements; 12 to 1 study. Afternoon—3 to 3½ singing and school drill; 3½ to 4 object lessons again for idiots and beginners; drawing, reading, and society for others. The number of pupils in daily attendance was was 374—198 males and 176 females—or 40 per cent of the whole. It was an exceedingly interesting and curious sight to see this school in session, usually entirely quiet, except when some case of acute mania would manifest itself for a moment. The old and young were seated on the same benches, with every expression of countenance, every degree of intelligence, every grade of moral development. Some had forgotten to be noisy under the sedative influence of quiet study; others in the absorbing interest of their books, laid aside for the moment their peculiar fancies, and worked away at their copy-books and spelling lessons regardless of visitors. Here and there the words and gestures of acute mania would crop out to the temporary disturbance of the general peace, and the vacant eye and aimless smile of dementia would show itself in the intervals of leisure and abstraction from the subject in hand. One elderly and evil-faced old student looked up fiercely from the story of 'Harry and Lucy' and exclaimed that he recognized me as the captain of the Swallow, and swore he would join his ship on Tuesday, and be ready for his beer. But nobody minded these trifles, and the teachers proceeded quietly with their work. What an example of the humanizing and sedative and controlling influence of system, order and routine. Dr. Lalor, the superintendent, regards the

school system as his first police regulative, his most convenient anti-spasmodic, his readiest revulsent, his most trusty sedative." *Report of Proceedings.*

Through the influence of Dr. Barstow's paper I have instituted a course of instruction in the Retreat with which I am connected. We have less than forty patients, and have tried the experiment for only a brief period, but from what experience we have already had there is no room for doubt that great benefits are to be expected from such a course of instruction. Some of the patients can only be induced to attend to their studies while under the teacher's eye; others, however, enter upon the work with great enthusiasm. One patient describes the school-room as the "door of heaven." Our school has been in session thus far only an hour and a half a day—from 10 to half-past 11 in the morning. More time will, however, be devoted to the school as soon as it becomes practicable to do so.

The difficulties in the way of the enterprise are, perhaps, quite as great as would be anticipated. Patience is always needed by teachers, and here it is especially needed. The *order* of the room is, to say the least, *different* from that of ordinary schools. The arrangement into classes is also extremely difficult, and cannot be accomplished until a considerable acquaintance with the pupils as such has been obtained.

The *advantages*, however, of a course of instruction cannot well be over-estimated. The school hours divide the day, give the patients something to think of, and tend to destroy that *ennui* so fatal to mental health or improvement. Few people can be happy who have nothing to do but to amuse themselves. It is only very strong minds and sensible persons who can have their time wholly at their own disposal without mental degeneracy. It is reasonable to suppose, therefore, that the insane will be benefited quite as much as the majority of the people are by mental work suited to their capacity.

That we may not be disappointed in the *results* of a school in an insane asylum, it is well to bear in mind that the aim before

us is very different from that of ordinary schools. We do not regard the acquisition of knowledge as an *end*, but as a means to the mental improvement of the pupil. The school-book is a physician's prescription, to be given under his immediate direction, and results that would be gratifying to him might be far from satisfactory to the professional school-master. The graduates of these crazy schools will doubtless never astonish the world with their learning, nor will the schools themselves ever be models for general imitation; but for the object sought they bid fair to meet the highest anticipations of their friends.

ART. III.—CASE OF RE-AMPUTATION AT THE HIP. By GEORGE A. OTIS, Assistant Surgeon U. S. A. Abstract from the American Journal of the Medical Sciences.

In the case of a soldier of the 4th artillery, whose left leg was shattered by a large projectile at Deep Bottom, Virginia, August 6th, 1864, and primarily amputated, and re-amputated at the knee August 23d, Dr. Otis re-amputated at the hip on May 25th, 1870, on account of osteomyelitis of the whole of the shaft of the femur. The patient, Julius Fabry, was thirty-eight years of age when remanded. He passed through many perils during his life in hospital, having a ball and fuse-screw extracted from his stump, the protruding condyles of the femur resected, and a bed-sore over the sacrum, which was long in healing. Having been returned to his regimental headquarters in 1865, he suffered from recurring abscesses in his stump; and when his regiment moved from Fort Washington, in 1865, he was discharged from service, and became a pensioner at the Old Soldiers' Home near Washington. For the next five years he had frequent attacks of severe suffering in consequence of the detachment of bits of dead bone and the reformation of abscesses. Constitutional treatment was employed, and efforts

were made to remove the dead bone; but it finally became apparent that necrosis of the femur extended quite up to the trochanters, and that exarticulation was the only remedy. The operation was performed by a long anterior flap-cut from within outwards, and a straight incision posteriorly. This operative method was necessitated by the masses of foliaceous callus on the outer part of the thigh bone, which would not permit of transfixion.

Necrosis of the Left Femur following Amputation for Gunshot Injury of the Leg.—An aortic compress was used, but not advantageously, as it seemed to increase the venous hæmorrhage. There was absolutely no arterial hæmorrhage, the femoral being controlled by Dr. Billings at the crural arch and in the flap, and ligated, and its branches as well, by Drs. Norris and Woodward, almost as soon as the incision was made. The flap readily united, and in twenty-one days the patient was able to be about on crutches. He made a good recovery, and late in December, 1870, was reported to be in excellent health.

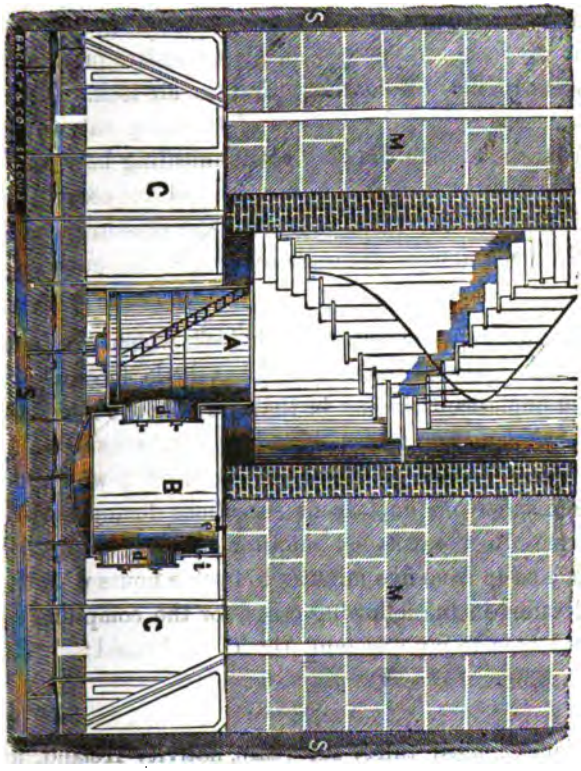
After describing the case, the operator gives a *resume* of the results of previous re-amputations at the hip in civil and military practice, and demonstrates the comparative safety of this operation in suitable cases.

ART. IV.—EFFECTS OF INCREASED ATMOSPHERIC PRESSURE UPON THE HUMAN BODY, with a Report of Thirty-five Cases brought to City Hospital from the Caisson of the St. Louis and Illinois Bridge. By E. A. CLARK, M. D., Professor of Principles of Surgery and Surgical Anatomy in the Missouri Medical College. [Published by request of the St. Louis Medical Society.]

Mr. PRESIDENT,—The members of this Society having, by resolution, requested a detailed report of the cases treated by me at the City Hospital who were effected in working in the compressed air in the caisson of the bridge now being constructed across the Mississippi river at this city, I would submit the following thirty-five cases: Though most of them present, in many respects, a degree of sameness, there is in some of them a contrast in the symptoms and results calculated to confuse any pre-conceived idea we may have had concerning the pathology of the affection. But before venturing to present these cases, I think it proper (for the benefit of those who are not familiar with it) to give a brief description of the manner in which the piers are constructed and the caisson entered at the bridge, which I have illustrated by the wood cut on the following page, showing a section of the pier with its shaft, and caisson at the bottom.

The caison C C, upon which the solid masonry M M rests, is octagonal in shape, 80 feet long, 45 feet wide, and 9 feet high, constructed of heavy boiler iron, like a large box with an open bottom. This caisson, like an immense diving-bell, is sunk to the bottom of the river with its open part down. Once resting upon the sand S, at the bottom of the river, air is forced into the caisson by means of pumps until the atmospheric pressure is sufficient to resist the pressure of the entire volume of water in the river surrounding the caisson, so as to prevent the water entering it at the bottom, where it rests upon the sand; while the compressed air also subserves another purpose—that of assisting to support the column of masonry resting upon the top of the caisson. The amount of atmospheric pressure re-

quired for these purposes varies at different times—always increasing, of course, as the work on the masonry progresses—but increased or diminished according to the depth of the water in the river which has to be resisted. At the time the workmen were most affected the caisson was resting upon the rock at a depth of 95 feet, the pressure averaging from forty-five to



fifty pounds to the square inch. It is in this compressed atmosphere that the workmen have to labor at digging up the sand and "puddling" it preparatory to pumping it out by large sand-pumps, thus allowing the caisson to sink in the sand as the weight of stone is increased upon the top of the pier, which is always above the water. Through the centre of the pier

there is an open shaft ten feet in diameter with a circular stairway, A, landing at the bottom of the caisson, which is entered through the air-lock B, which is an iron box six feet square, in the following manner: On reaching the bottom of the stairway the air-lock is entered through the small door *d*, which opens inwards. This door is then closed, and the air forced into the lock through the air-valve at *i* until the pressure is equal to that in the caisson when the door *d*, communicating between it and the air-lock, swings open, while the entire pressure is then bearing upon the first door entering the air-lock. The manner of coming out is just the reverse of this; on entering the air-lock from the caisson the door communicating between them is closed from without, and the air allowed to escape from the "lock" through the valve at *e* until the pressure is reduced to that of the common atmosphere, when the outside door is opened.

While passing through the air-lock, which requires about five minutes, persons complain of but little inconvenience, except the unpleasant ringing in the ears from the increased pressure upon the tympana. This, however, subsides when the pressure has become equalized, and with but few exceptions the workmen suffer no unpleasant sensations during the two hours they remain in the caisson; but after entering the open air they are attacked in from five minutes to twelve hours with the symptoms detailed in the following cases, for the compiling of which I am indebted to my assistant, Dr. T. A. Arnold:

CASE I.

William C., aged thirty-six years, nativity Ireland, admitted to the hospital February 15th, 1870. Remarkably strong and robust man, and had labored two hours in the caisson of the bridge.

Symptoms.—On leaving the air-chamber was seized with excruciating pain in the head, chest, and extremities, and with hæmoptysis. No paralysis.

Treatment and Results.—Chloroform by inhalation and per mouth. Towels saturated with it and applied to the spine. This treatment gave perfect but only temporary relief. Followed by full doses of morphia.

February 16th. The patient was comparatively comfortable, though suffering some pain in the shoulders and lower extremities. The morphia was continued, and he slowly improved, and March 23d, 1870, was discharged well.

CASE II.

Charles G., aged twenty-five years, nativity United States, was admitted to hospital February 21st, 1870. Received directly from the caisson, in which he had labored only two hours.

Symptoms.—On leaving air-chamber at 4 o'clock p. m., began to feel a dull aching sensation in the joints of both the lower and upper extremities, which increased in severity until his arrival at the hospital at 7 o'clock p. m., when he suffered the most excruciating pain. That of the upper extremities seemed confined principally to the shoulders, while that of the lower extremities traversed the whole course of the limbs; and was described by the patient as "a grinding pain in the bones." No paralysis.

Treatment.—Hydrate of chloral, gr. xv., given every half hour; and after the third dose was administered the patient slept soundly till 12 o'clock at night, when he again complained of pain, and was again relieved by the administration of gr. xv. of the hydrate of chloral.

February 22d. Was still suffering from pain in both the upper and lower extremities, though much less severely than he had the evening before. The hydrate was again administered, followed with opium, gr. j., every two hours, which rendered him comparatively comfortable.

The opium treatment was continued till the 8th of March,

when he was able to walk about the ward, suffering only occasional pains in the joints of the lower extremities.

March 14th. Had entirely recovered, and was discharged.

CASE III.

Joseph O., aged twenty-five years, nativity Ireland, was admitted to hospital February 21st, 1870.

Symptoms.— Had worked in the bridge only two hours; on going down, the only disagreeable symptom experienced was that of slight pain in the ears. Immediately after coming into the open air, seized with intense pain in the right leg and arm, and in the lumbar region. He soon became paralyzed in the lower extremities, including the bladder and sphincter ani. When he arrived at the hospital he was in a semi-conscious condition, with perfect paralysis and anæsthesia of the lower extremities. Did not complain of pain.

Treatment.—A purgative, followed by potass. brom., gr. xv., every two hours.

Feb. 23d. Had recovered consciousness; had very little pain.

26th. Sensation returning; some blood in urine.

27th. Sensation still improving; urine still bloody.

March 1st. Sensation was pretty good, though he was unable to distinguish a pinch from the touch of the finger.

March 2d. Had marked hyperæsthesia; thought that every object that touched him was the prick of a pin.

March 5th. Very little hyperæsthesia; was able to move his feet slightly; had entire control over bladder and sphincter ani. All treatment was suspended.

March 12th. He has constantly though slowly improved, and is now in the hospital, able to walk about the house without assistance.

CASE IV.

George G., aged thirty years, nativity Germany, was admitted to hospital February 27th, 1870, after having worked two hours in the caisson.

Symptoms.—On coming out he was at once attacked with severe pain in the lower extremities, which was soon converted into a dull, aching sensation along the whole course of the limbs. When he arrived at the hospital was suffering very litte pain, but had perfect paraplegia, including the bladder and sphincter ani. Had some pain of a migratory character, confined almost exclusively to the joints of the lower extremities.

Treatment.—The galvanic battery had been perseveringly applied before he left the bridge without benefit, and on arrival at the hospital cups were applied along the whole course of the spine, but no change of symptoms followed.

March 1st. All the previous symptoms existing together, with partial anæsthesia of lower extremities.

March 11th. Complained of pain in the hypogastric region, and on introducing the catheter drew off a thick mucilaginous material, with a small quantity of bloody urine. Warm fomentations, with medium doses of opium, soon relieved these symptoms; the paralysis of the bladder and sphincter ani disappeared, and the patient seemed much better.

April 1st. Had contracted severe bed-sores, and was furnished with a water-bed, which made him comfortable. There was then not much change in his symptoms till May 1st, when he complained of intense pain over the whole of the abdomen, which was only partially relieved by warm fomentations and the administration of opium. From this time he declined rapidly, and died May 8, 1870.

It should have been stated in this case that during most of the time his lower extremities were so completely paralyzed, and the hyperæsthesia so intense, that even exposing his body to a slight current of air would cause him severe pain and involuntary movements in his paralyzed extremities.

The Post Mortem revealed extensive lesion of almost every organ in his body. The brain was very much softened, and there was an extensive deposit of pus beneath the arachnoid, covering almost the whole surface of the brain; the arachnoid

and dura mater were so completely adherent that they could not be separated, and there was a considerable amount of exudation between the dura mater and the cranium. The dura mater of the cord was very much thickened and opaque, while instead of the spinal fluid we found nothing but a serous pus. The substance of the cord itself was softened to almost a pulp as high as the fifth cervical vertebra. The walls of the bladder were immensely thickened, while at the same time softened and saturated with extravasated blood. The mucous membrane of the bladder was partly denuded and in a gangrenous condition.

The whole of the peritoneum had been involved in inflammation and its surfaces extensively agglutinated together. There was also inflammation of the bowels, with gangrene of the rectum. The kidneys were considerably enlarged, and contained several small abscesses, both in their cortical and medullary substances. The spleen was enlarged to three times its normal size, and very much softened. The liver was also excessively congested and enlarged. The lungs were not so materially affected, though somewhat congested, most of which was hypostatic and *post mortem*.

NOTE.—The other cases, from case V. to XXXV., were, in the main, similar to these herein reported. The symptoms varying more or less in severity, with a varied treatment the results were much alike; the mild cases recovering as in case I. and II., and the grave cases presenting symptoms and post mortem results very similar to those detailed in the report of case IV. E. S. G.

Prof. Paul F. Eve has kindly presented me the history of three cases which came under his own observation, which I add here as given in his own language:

Lewis B., aged 21, came under my observation February 26, 1870. I found him suffering the most intense agony of pain I have ever witnessed from the hip joint down to the foot. Without a moment's delay I gave him a hypodermic injection of sulphate of morphia (gr. $\frac{1}{4}$), and the same amount immediately afterwards internally. He experienced almost instant relief.

Upon inquiry I found him to be one of the victims from working in the caisson of confined air, in the erection of the piers of the bridge across the Mississippi river. Taking full notes of case, they read thus: Commenced work in the caisson some time during the month of November, 1869, and worked constantly up to the time of the present attack. About six weeks after commencing work he felt some stiffness in the knees and hips, which continued up to February 26, 1870, the beginning of the present attack. About Christmas week he had a severe hæmorrhage from the nose on leaving the confined air, preceded by a violent attack of pain across the frontal bone, just above the eye-brows, which was instantly relieved by the bleeding. Had another bleeding at the nose just two weeks before the present attack. Experienced a dry cough during the time he worked in the confined air. Two days before the present attack he had urticaria over the whole surface of the body. While the eruption was upon the surface he felt perfectly well, but immediately upon its disappearance he was attacked with violent pain in the right leg from the hip down, almost producing convulsions, which continued about an hour. He was then carried to his house. On the way from the bridge he was violently attacked again, during which attack I was called to see him. I found him suffering intensely in the lower extremity, and in the right upper extremity, between the elbow and shoulder joints. Had violent muscular contraction in both extremities upon the right side of the body, also twitching of the muscles of the face and tongue.

February 26th. Pulse about eighty beats to the minute; tongue clean, bowels regular, appetite good, which have continued the same up to this time, March 7th. As a regular course of treatment, placed him under bromide of potassium—10 grains every two hours—with an anodyne of 30 drops of laudanum at night. Continued this treatment up to March 4th without any perceptible effect. I then determined to try Dr. S. B. Smith's electro-magnetic machine, which I did with the most happy result. I placed the positive pole of the battery over the lumbo-

sacral region, while the negative pole was passed rapidly over the extremity. I have continued this once a day up to the present date, March 7th. My patient to-day is walking around without any inconvenience, except a slight pain in the right knee.

March 12th. Patient perfectly well; improved rapidly under the use of the battery.

Mike Mahoney, aged 21, commenced work in the caisson between the middle and last of January, 1870; worked about four days before feeling any symptoms of pain whatever. At the expiration of that time the first symptoms experienced were stiffness and pain in the joints alternately, the right leg from the hip down being paralyzed (sensation alone, motion being unimpaired) for about an hour and a half, the severe pain in the joints continuing. He then ceased to work for about ten days. At the end of that time he resumed it again, entirely free from any symptoms; but upon entering the caission and remaining for two hours, then coming again to the open air, he felt again violent pain in the upper and lower extremities, which continued during the time he was in the open air (two hours). Descending again in the caisson, on reaching the confined air he was entirely relieved. Worked for two hours, and again ascended to the open air, when he was more violently attacked than before. In addition to the pain in the extremities he had a burning, suffocating sensation in the chest, with paralysis of sensation alone of the left side of the face and tongue, which lasted about an hour and a half; but the pain in the extremities continued about twenty hours. Being somewhat relieved at the end of that time, he again resumed work (the caisson being just four feet from the west bed), and remained down for two hours, and came out without any additional suffering. Remained out two hours, then went down and remained two hours; came up again and sat by the stove, when he felt intense pain again in the joints alternately and violent pain in the epigastrium, at the centre of which there was a red spot about the size of half a dollar; the suffocating pain in the chest continuing more

violently than before, with paralysis of sensation of the whole body from the neck down. He was then carried to his home. On the way he had violent vomiting twice. The paralysis of the body lasted about five hours; he then began to get better, the pains gradually leaving him, but extreme dizziness or vertigo all the time, which has continued up to date, March 8th, 1870.

John C., aged 43, about the middle of January, 1870, commenced work in the caisson, and worked only four hours; came out to the open air feeling perfectly well. On his way home, just entering Broadway, he was violently attacked with pain in both knees, not feeling any symptoms elsewhere. He received no treatment, except his physician gave him a liniment of some kind to rub on his knees. The pain in his knees continued up to date, March 7. I tried to persuade him to allow me to apply the battery, but he would not.

SUMMARY.

Whole number of cases admitted to hospital			35
Cured	27		
Relieved	3		
Died	5		35
Cases accompanied with paralysis			19
" " " hyperæsthesia			11
" " " hæmoptysis			2
" " " rupture tympana			1

NOTE.—The author of this paper completes it by giving several pages in regard to the pathology of the conditions and results observed, but inasmuch as his views and explanations have been criticised in extenso, and inasmuch as he is now engaged in bringing before the public a defence of his pathological explanations, the concluding portion of this report is omitted. When his pathological expositions are completed and published an analysis of them will, in justice to himself and those interested, be presented. E. S. G.

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—THE MEDICAL YEAR 1870.

Almost all of the space allotted to this department is surrendered for the following interesting extracts from The London Lancet, giving, as they do, an excellent epitome of most that has been accomplished in the several departments of the science of medicine during the past year:

In the domain of physiology—using the term in its widest extent—the most interesting subject that has attracted attention is that of Spontaneous Generation, the consideration of which constituted the address of Professsor Huxley to the British Association at Liverpool, whilst numerous experiments have been made upon it by Dr. Charlton Bastian. The researches of Tyndall on Haze and Dust appear also to have an important bearing upon it. Professor Huxley, in his interesting address, stands forward as an opponent of the theory of spontaneous generation, except in so far that if it were "given him to look beyond the abyss of geologically recorded time to the still more remote period when the earth was passing through physical and chemical conditions, which it can no more see again than a man can recall his infancy, he should expect to be a witness of the evolution of living protoplasm from not living matter"; otherwise he holds that inorganic matter cannot form organic compounds except under the influence of pre-existing protoplasm. Dr. Bastian, on the other hand, endeavors by numerous and carefully conducted experiments to show that, under conditions that preclude the idea of the pre-existence of ova or living particles of any kind, organisms of low type—such as bacteria, vibrios, and various simple fungi—may develop when thier chemical elements are brought into relation under otherwise favorable

circumstances of light, heat, and moisture. Professor Tyndall's researches here come in, showing that under all ordinary conditions the atmosphere is charged with a fine dust clearly of an organic nature, since it is destroyed by a red heat, and which, as we do not yet know its precise relations to temperature, may possibly contain the germs of such organisms as have not been destroyed by the temperatures to which Dr. Bastian's infusions were subjected. The question will be settled when some inquirer obtains a living and growing organism from chemically pure oxygen, hydrogen, nitrogen, and carbon in the presence of water—a consummation from which we appear to be sufficiently distant as yet. Dr. Carpenter, in a lecture delivered before the Royal Institution, has embodied the results of the deep-sea explorations carried on in 1869 by H. M. surveying vessel Porcupine, in which most interesting information was obtained respecting the temperature of the sea and the distribution of animal life at its bottom, showing that the former varies to a much greater extent at different levels than has hitherto been supposed, while the amount of animal life and the number of species appear to vary, not, as was once inferred, with the depth, but with the temperature at the bottom. No important advances have been made in our knowledge of the blood, with the exception of Dr. Klen's observation that the white corpuscles multiply by division both in triton and in man; their escape from the blood vessels in inflammation, as described by Addison and Chonheim, has been corroborated by various observers, the most recent being Dr. Caton. Saviotti has observed the reverse process of absorption of pigment into a blood vessel. Valuable papers have been contributed upon the mechanics of the circulation by Dr. Herbert Davies, Professor Haughton, and Dr. Buchanan; Professor Haughton considering the force of the left ventricle of the heart as equivalent to about ninety-foot tons per diem, whilst Dr. Buchanan, proceeding on different data, estimates it at about one-half this amount. The subjects of digestion and absorption have received but little attention. Legros, Schmidt, Hering, and Kisselew, have given more or less

complete accounts of the structure of the liver; and it now appears certain that the finest ramifications of the biliary ducts enter the lobules and run between the proper cells; the presence of a membrana propria has not been demonstrated, and it seems not improbable that the walls are formed by the hepatic cells themselves, the opposed surfaces of two such cells having corresponding grooves, which, together, form a canal. The formation of urea in the liver, and the purely execretory function of the kidney, seem to be confirmed by the experiments of M. Grehant and Dr. Cyon. The subjects of respiration and of animal heat have beeen pursued by J. Muller, who has lately conducted an important series of investigations on the respiratory function under Ludwig's superintendence at Leipzig; by Mr. Blake, who shows that the left side of the body is oftentimes, especially during exertion, hotter than the right; by Andral, who has examined the temperature of infants; and by Horwath, who demonstrates that any irritation of the sensory nerves causes a depression of the animal temperature. A considerable number of essays have been published on the structure of the nervous system, both in regard to its central parts, and as by Drs. Arndt, Broadbent, Strachan, and others, and the peripheral terminations, as by Michelson, Ciaccio, Grandry, Nepveu, and many more. No great discovery, however, appears to have resulted. Some interesting researches have been made by Schiff, showing that the nerve-centres undergo an increase of temperature when excited by sensory impressions; whilst Place has examined the rapidity with which motor impulses are propagated, and shown that it is about at the rate of 53 metres a second along the forearm—an estimate that differs from that of Helmholtz and Baxt (33.9 metres per second), but only owing to the circumstance that the portion of nerve irritated in M. Place's experiment was more peripheral, and, as he demonstrates, through a portion of the nerve that propagates impressions more rapidly than that lying nearer to the centres. The minute anatomy of the ear has been carefully investigated by Goltz and Rudinger; and in Mr. Hulke's lecture at the College of Surgeons the most

recent additions to our knowledge of the minute anatomy of the tissues of the eye will be found. In reference to muscle, Pensen's observations on the structure of striated muscle are of interest as corroborating views entertained long ago by Dr. Carpenter; they, however, require confirmation, and have been opposed by Krause. Voit has contributed an interesting essay on the history of our present views respecting the development of muscular force, in which he vigorously assails the position taken up by Liebig in his recently delivered lectures. A large number of works on development have appeared during the past year. At the University College in May, Professor Huxley, in an address which we published in full, with his usual force raised an outcry against the unpractical and bookish way in which physiology is taught, or, at any rate, learnt by students. A very lively controversy ensued between the Professor and Dr. Pavy, who took the Professor's remarks as a reflection on the teachers of physiology. Good, however, will come of the controversy, and more attention will be given to this foundation-stone of medical knowledge.

In the region of medicine proper we scarcely know where to begin. Let us take first the great subject of anæsthesia. Dr. Richardson, the indefatigable laborer in this department—and who, by the way, must have discovered a score or two of anæsthetics—made communications to the Medical Society and to the British Association on the production of anæsthesia. Dr. Richardson aims at the discovery of an anæsthetic which shall destroy sensation for a very short time, and yet leave consciousness, will, and organic muscular power unaffected. This will indeed be a great discovery. It will give a curious direction to our attempts to differentiate mental qualities and the parts of the nervous centres in which they reside. Dr. Richardson's experiments, especially those with methylic ether, give proof that it is possible to remove pain without abolishing consciousness.

Closely allied to the class of anæsthetics, and yet curiously different from them, is the hydrate of chloral. We are glad to

be able to say that the uses and action of this remarkable and valuable new medicine have received continuous and varied illustration in The Lancet during the whole year. Never, perhaps, was any new medicine experimented with more extensively and with less disappointment. It is true that the clinical use of it has shown that it does not possess the decided anæsthetic properties which were at first attributed to it; though in the very first number of our last volume (on the 1st of January) a case is recorded in which a leg was amputated without any sign of suffering in a patient under the influence of seventy-five grains. But the dose here was large, and was followed by alarming coma, delirium, and prostration. The opinion of the operator was against the use of chloral as an anæsthetic. And this is the general result of clinical observation. It procures continuous sleep, in moderate doses, at once more harmlessly and decidedly than perhaps any other substance. For this purpose it has been found useful in almost every disease, and in pure insomnia. It is quite certain, however, that we have yet to learn more about the action of this drug. One curious circumstance is that it does not act all at once. In a case within our knowledge one moderate dose would give two or three nights' sleep. Other observers think they have discovered some depressing effects on the nervous system from its long continuance. But for occasional use, in cases where opium and other hypnotics are inadmissible, it is invaluable, and it fills us with hope that we have not seen the end of medicines of this kind. The case we have alluded to shows that we should not begin with too large doses. On the other hand, instances have been recorded in which large doses have been given by mistake with no bad permanent effect, particularly one related in The Lancet of August 13th, in which no less than seven drachms are said to have been taken, with only the inconvenience of a temporary loss of power in the legs. The patient in this case was a singularly sleepless man, to whom chloral at first was a delightful remedy, till it began to lose its effect, and he came to take dose after dose in the dark until on this occasion he took seven drachms.

The use of alcohol in health and disease is one of the most important questions that can engage the attention of our profession. Dr. Parkes and Count Cyprian Wollowicz, M. D., assistant surgeon of the army medical staff, reported experiments on the effects of alcohol and on the effects of claret, in separate papers, to the Royal Society. These experiments, it is right to say, were made on one man, and he a man capable of health without the assistance of alcohol even in trying circumstances. Still, making all allowances, they were very valuable contributions to a scientific view of this subject; and they went to show that little more than two ounces of alcohol produced undesirable effects—lessened the appetite, depressed the nervous system, and quickened the pulse. We ourselves, in our editorial columns, have directed attention to the prevalent doctrines of debility and its treatment. Dr. Wilks, in a letter in an early number of the last volume of The Lancet, delivered his views on alcoholic stimulation in disease; and in a late number some very pertinent remarks by Sir William Jenner on the use of stimulants in typhoid will be found. Mr. Oay, in his opening address as president of the Medical Society, expressed his disapproval of the large administration of alcoholic stimulants in disease. We dwell upon this subject the rather for two reasons: First, its extreme importance; and secondly, because we have never lost sight of it or held any extreme views. When it was the fashion to intoxicate pyrexial patients we were not led away by it; and now that a most commendable care in regard to the practice is setting in, and physiologists and physicians are seeing their way to the advantage of well-defined qualities, we can only be gratified at the confirmation of views which have all along been expressed by us, and at the prospect in health and disease of a more careful use of alcohol. In the American war the issue of a spirit ration to the soldiers of McClellan's army was discontinued, upon the advice of the medical officers, without any apparent injury to the men. We have recently remarked on the fact that not a ration of rum or spirit is served out to the German soldiers. They are performing

their prodigies of victory and of endurance on simple, compact, nitrogenous food, and a bottle of light wine a day containing an ounce and a half or two ounces of alcohol—the quantity which Dr. Parkes, Dr. Anstie, and other observers, would agree in thinking the amount which can be taken without producing more or less of narcotic effect.

A bold experiment in the treatment of pyrexia was made by Dr. Wilson Fox. It is well known that a very high temperature in acute rheumatism is apt to be followed by death in a few hours. Dr. Wilson Fox tried the effect of the cold and tepid bath in a case of acute rheumatism, on the view that as it tended to reduce temperature in typhoid in the hands of Liebermeister and others, so it might reduce the fatal pyrexia in acute rheumatism. The experiment was so far successful that the temperature fell considerably after each bath, and the life of the patient seemed to be prolonged by it. She ultimately died; but the treatment was, unfortunately, complicated by a very copious bleeding. The record of this case will be found in The Lancet of July 2d. In the month of April we noticed in the *Deutsches Archiv fur Klinische Medicin* that Dr. Ludwig Schroder gave a good account of the use of cold baths in typhus, and their effects in the production of a marked diminution in the excretion of carbonic acid and urea, and probably, therefore, in diminishing or retarding the change of tissue. The physiology of pyrexia, so to speak, will have to be much more accurately defined before we arrive clearly at its proper treatment. Meantime it seems not impossible that a use of the cold bath may become a part of scientific practice. Six hours of the temperature of 109° is apparently fatal to life. A revolution appears imminent in our views of cooling medicines—quinine and brandy threatening to take the place of salines or effervescing draughts, albeit in cases of moderate pyrexia we have yet to learn that the latter are not the best remedies. The successful treatment of seven or eight cases of hydatid tumors of the liver by electrolysis is a new and promising novelty in practice. The cases were treated by Dr. C. Hilton Fagge and Mr.

Durham on the suggestion, we believe, of Dr. Althaus. The facts were reported to the Medical and Chirurgical Society in November. Among other therapeutical work, we would specify Dr. John Harley's further researches into the action of conium. The successful use of nitrite of amyl in tetanus and in angina pectoris, of chloral in the same diseases, of quinine in acute lumbago, of chloride of ammonium in suppurative hepatitis; of drachm doses of tincture of henbane, with a little sulphate of magnesia, three times a day in orchitis; of large doses of quinine in military surgery as a remedy in pyæmia and septicæmia, may be mentioned as illustrations of the fact that we are not yet likely to dispense with the use of medicines in medical practice. We recorded in April a case of recovery from the bite of the cobra, treated by Dr. Shortt with suction, solution of potash, and brandy; as also at different times several recoveries from tetanus, treated variously by chloral hydrate, nitrite of amyl, etc. Of medical work other than therapeutical, space would fail us to speak. We may but mention a few instances. Dr. Herman Weber's paper at the Pathological Society "On the Connection between Caseous Deposits and Miliary Tuberculosis," though not convincing, is suggestive. Dr. W. H. Dickinson reported to the Royal Medical and Chirurgical Society the result of five post mortem examinations of the nervous centres in diabetes. In all he found degenerate changes, and these were limited to the nervous tissue in the vicinity of the small arteries.

Surgery goes steadily on, progressing in refinement and in efficiency as it becomes more physiological. One very beautiful piece of surgical practice, for which we are indebted originally to a French surgeon (M. Reverdin), has been most successfully introduced into England by Mr. Pollock, of St. George's Hospital—skin-grafting or the transplantation of very small pieces of skin to the surface of large ulcers. We gave an early account of the first case in which Mr. Pollock tried this practice. He brought the subject under the notice of the Clinical Society. His success was soon repeated in his own practice and that of

others. Thus we have to record a new resource in those troublesome and tedious cases of large ulcer or of excessive loss of skin from burns, etc. Sir H. Thompson, on May 10th, gave an account to the Royal Medico-Chirurgical Society of 184 consecutive cases of lithotrity operated on within a recent period, accompanied with the statement of this principle, that with very few exceptions all stones of an ounce and upward were reserved for lithotomy; all obviously below that were crushed. Not one case was refused operation, not one was left unfinished, and in no instance was an operation of lithotrity completed by lithotomy. The recoveries, reckoning every kind of casualty following the operation, were 93 per cent. A second operation (for recurrence of the stone) was performed for 13 of the 184 cases. We will not begrudge Sir Henry Thompson his conclusion, that lithotrity is an eminently successful operation. Mr. Erichsen, in the debate which followed, attributed Sir Henry's success to early diagnosis of stone as well as to personal skill.

Mr. Thomas Keith, of Edinburgh, in The Lancet of August 20th, recorded his second series of fifty cases of ovariotomy. Of the 100 cases now reported by Mr. Kieth, 81 recovered. In the first 50 the mortality was 22 per cent.; in the last fifty it was only 16. We congratulate Mr. Keith on such an addition to the credit of British surgery. He significantly says the greater number of those who died were poor worn-out women, who came late in the disease. The mortality would probably have been much lower if there had been earlier operation in many of them.

We remarked in the course of the year on some post mortem observations by M. Ollier, of Lyons, of great interest as to the reparative power of bones after resection at the elbow-joint. In one case an inch of the ulna was reproduced, together with a groove for the play of the ulnar nerve.

Closely allied with the subject of hospitalism in our minds, if not in fact, is the question of the antiseptic use of carbolic acid. Professor Lister's views have received a great accession of support during the year 1870, whatever be the ultimate fate

of the germ theory on which they rest. The letter of Professor Saxtorph, of Copenhagen, forwarded to us for publication by Professor Lister in the end of August, is as striking a testimony to the power of this treatment as anything that Professor Lister has written. All compound fractures, some of them severe ones, have been healed without the least suppuration in the fracture itself, and the consolidation did not take much longer time than in cases of simple fracture. No case of pyæmia had occurred in Professor Saxtorph's wards after his return from Edinburgh; and he avers that the result is certainly due to Professor Lister's treatment. Other favorable testimony from various quarters has been borne; while on the other hand it must be admitted that many surgeons report that they have not got such results from the antiseptic treatment, or that they have got similar results without using the antiseptic means. *Apropos* of this question, we must allude to Professor Huxley's opening address to the British Association, in which he argued strongly in favor of the biogenetic view of life, and alluded to Professor Lister's results, and to the researches of Dr. Burdon-Sanderson on the intimate nature of contagium, as a part of his argument. Before leaving this question of the antiseptic treatment, we may say that a striking illustration of its power to prevent suppuration in compound fracture has reached us from a pupil of Professor Lister's, a medical missionary in Samao, one of the islands of the South Sea. The carbolic acid was applied by two native assistants, Zeru and Afele.

Turning from the art of medicine briefly to notice the character of disease during the year, we have but an unsatisfactory account to give. It has been a year of most extensive epidemics—one or two of which have been very fatal. The opening of the year found the London poor extensively affected with relapsing fever. In the last two months of 1869 there were admitted to the Fever Hospital the unprecedented number of 472 in November, and 511 in December. This disease, which seems to have abated in London in favor of still more serious epidemics, has appeared on a very extensive scale in

other towns, especially in Liverpool and Glasgow, where it has mocked existing accommodation for epidemics. Though relapsing fever has prevailed chiefly amongst the poor, there has been a growing tendency to doubt whether we are right in regarding it as simply caused by famine. Typhus, too, has prevailed to a considerable extent throughout the country. There has also been a good deal of typhoid during the year, occurring, according to its habit, with a peculiar localism. One of the most remarkable of its outbreaks occurred during July and August in Islington. It has been almost crucially shown by Dr. Ballard that it was propagated through the medium of the milk of a certain dairyman, who himself died of typhoid. In two other instances, particularly recorded in our columns respectively by Dr. Bell of St. Andrews, and Dr. Taylor of Penrith, milk was evidently the medium of the contagion of scarlet fever. Dr. Heslop, of Birmingham, also made a valuable contribution through our pages to the knowledge of the way in which scarlet fever is propagated by the laundry, notwithstanding the steeping of infected clothes in a tub containing Condy's fluid, and boiling.

Epizootics have been as plentiful as epidemics. Foot-and-mouth disease, pleuro-pneumonia, and sheep-pox, have all been amongst us. The first was lately said to be in forty-one counties of England, four of Wales, and ten of Scotland. The rinderpest, too, has appeared in various parts of the continent, in the track of the German armies, and in America. Dr. Thorne's report to the Privy Council shows that the milk of animals affected with foot-and-mouth disease produces injurious effects of a stomatitic order on those who drink it.

The project to diminish the number of the existing medical schools of the metropolis and to unite them so as to form two or more large schools has been very favorably received in many quarters; and, we believe, is about to be considered by the staff of one of the leading schools.

The year 1870 will be remembered for its deaths. We are most perceptibly poorer in medical genius, and skill, and learn-

ing, on account of the deaths of the year. Sir James Y. Simpson, Mr. Syme, Dr. James Copland, and Sir James Clark, were men that have dictated medical doctrine to the world with rare authority. Mr. Syme's age and previous illness had prepared the profession for the great loss it sustained by his death, although his characteristic letters in our columns in the early part of the year almost made men forget that he was laboring under any infirmity. The mention of Sir James Simpson's illness preceded his death by about three weeks; but this was not long enough to save the public and the profession from a great shock when it was announced that the discoverer of the anæsthetic properties of chloroform, and the gifted, genial, great-headed, and hospitable professor of mid-wifery in Edinburgh was no more. The public were disconsolate; the grief was European and American—nay, universal; and Edinburgh mourned as it had not done since the death of Sir Walter Scott or Dr. Chalmers.

We are on the eve of some changes. Our wish is that they should be honorable and beneficial changes. They are urgently needed. There is a risk of the scientific and professional spirit failing amongst us if something is not done more stringently to secure the high training of medical men and shut the doors of the profession against unworthy entrants. Let us hope that the year 1871 will find the Government and the profession united in an effort to elevate the education of the profession, and to perfect the means by which that education is tested.

ART. II.—TREATMENT OF TYPHUS FEVER BY COLD BATHING. By O. DE WET FEHRSEN, M. D., Edinburgh.—*Lancet.*

Any practical and well-established fact in connection with the successful treatment of typhus fever will be welcomed by the

reader. The following extract from The Lancet is so tersely and concisely written that an analysis of it would be impracticable, the subject is therefore presented in the language of the author:

Readers of The Lancet will, no doubt, be aware that the typhus now raging among the French and Prussian troops is the "typhus abdominalis" of the Germans—our "typhoid or intestinal fever," a type of fever much milder than our "endemic Scotch or Irish petechial typhus," less pronounced in its invasion and much less contagious, although cases have occurred among hospital attendants which leave no doubt of its contagious nature; the percentage of these, however, is very trifling, as the admirable hospital arrangements, amongst which are the cavalry barracks extemporized into large wards, secure the utmost cleanliness, and no lack of fresh air. The fever cases are indiscriminately mixed with the wounded and those suffering from dysentery, of whom there are several hundreds. On their arrival from the Rhine the fever cases present a very formidable appearance, especially amongst the French prisoners, among whom, consequently, the largest percentage of fatal cases occurs. From the general breakdown of the French commissariat these poor wretches were half-starved before their capture, and on taking ill were, depressed in body and mind, forwarded with hundreds of others, sick and wounded, with but scant attendance, to Dresden and other places in Prussia. Amongst these were some very serious cases of fever, offering a very fair field for testing any particular line of treatment. This was accordingly done, and the cold-water system put to the test by the physicians who had voluntered their services in aid of the sick and wounded. I may mention *en passant* that the employment of cold baths in the treatment of typhus in the Stadtkrankenhaus has been followed for the last three or four years. Few of the medical men had, however, the courage to try it in private practice, partly from the lack of water prevailing in the houses in Dresden, but chiefly from the difficulty of persuading patients and their friends to consent to the trial of what

appears such a severe measure. In the Stadtkrankenhaus, however, the arrangements for bathing are complete, and with a large hospital attendance as many as six baths a day to a single patient lead to no inconvenience. The practice carried on here is as follows: As soon as possible after admission into the hospital the temperature of the patient is ascertained—in women from the axilla; in men, per rectum. If the thermometer shows 40° of Celsius or centigrade, equal to 104° Fahr., he (or she) is put for fifteen minutes in a bath of 15° of Celsius (59° Fahr.) up to the neck; in cases of much headache or delirium, an additional quantity of cold water is poured over the head, or cold compresses applied. A measurement three quarters of an hour afterwards uniformly shows a fall of two to three degrees. The cold bath is repeated during the first week, from four to six times a day, or as often as the temperature attains 39·5°; experience having shown that the rapid cooling down of the febrile heat to a normal temperature is a powerful means of mitigating the symptoms, shortening the duration of the disease, and favoring an early convalescence, besides obviating the necessity of prolonged bathing at a later period of the disease. The most striking benefits resulting from this cold bathing are—1st. That the delirium is generally either mild or easily subdued. 2d. An earlier return of sleep. 3d. A total absence of bed-sores. 4th. A less prostrate state of the system when the patient leaves the hospital.

Women, being more manageable, bathe more willingly than men; indeed it seems to require no small amount of resolution to get into a bath of such a low temperature (in Leipzig they use even colder water than here). Many cry or give way to moaning for a few minutes, until by a little courage and lying quite still the body gets accustomed to the cold. If the water be, however, in any way disturbed, immediately they commence moaning and crying, showing probably that the stratum of water in immediate contact with the body must have acquired a higher temperature from the evolution of the febrile heat.

After the first bath the sick show less objection to its repetition; indeed some ask for it, whilst others have been found at night stealthily to get into a bath in the absence of the nurse. I saw 200 cases in different stages of the disease, mild and tractable, very unlike what one would meet in a hospital where a purely medicinal treatment was adhered to.

Nothing contraindicates the use of the bath except a very feeble heart's action, hæmorrhages, or perforation of the bowels; nor is a little bronchial affection looked upon as an obstacle in the course of bathing. The lightest food, with very little claret, is all that is given. Quinine is administered for the specific purpose of lowering the febrile heat—one gramme, equal to sixteen grains, in two divided doses in the evening; it is supposed that in this way its full febrifuge effect is obtained. I was told that two physicians, who had much experience in the famine typhus which raged in the Northern Prussian Provinces some three years ago, had been called to the German headquarters, and there ordered a number of the fever cases to be carried out of their beds and put into the river Maas, with the happiest results. The statistics of the Stadtkrankenhaus at the present time contrasts most favorably with those of a few years ago, when the mortality averaged 11¾ per cent., as at present it does not exceed 4 per cent.; and I am assured by one of the physicians, in whose wards there is a large excess of typhus cases, that out of upwards of seventy-six cases, of whom nearly one-half were brought in from the railway station in the most deplorable state of prostration, he lost only two cases—a result which he never could have expected or obtained by any other process of treatment. I have seen the cases myself and communicated with the attendants, and have no reason to suspect that any special hobby could have made any of these parties state what was not also lately in accordance with the results realized; indeed, cooking of reports or accounts would be simply impossible in the Stadtkrankenhaus and military lazarettos unless everybody becomes part and parcel of the deception. Cold bathing in fever must always, I imagine, remain a trying

affair in private practice; but the physician who would allow himself, through any difficulty or opposition on the part of relatives or friends, to be debarred or terrified from employing in an urgent case of typhus such a powerful remedy as a cold bath, will certainly not study his own interest, and least that of his patient. The result of the first bath will not fail to remove all opposition to its repetition. The more timid of the practitioners here employ frequent cold sponging or the application of cloths steeped in cold water over the chest and abdomen.

It appears to me that, in spite of the wretched lowering or starving system which prevails so much in Germany, the results of their cold bathing in fever contrast most favorably with our experience at home, and carry with them a strong recommendation to give the system a fair trial in our hospitals at home, even if we should begin with a less trying temperature than that of 59° Fahr. I am told by German physicians that they would not hesitate to employ cold baths in cases of genuine petechial typhus; nor can I see anything in their employment imcompatible with our exhibition of wine or brandy. The baths might, in the first instance, have a pleasant and bearable temperature. They might, as it has been shown they do in the typhoid type, modify and shorten the period of excitement and delirium so as to exert a salutary influence on the subsequent prostration and tendency to asthenic coma. The high temperature which prevails for several weeks in typhus and its allied types, vitiates all the secretions, exhausts the nervous centres, thereby impairing the heart's action, producing a drooping state of the vital powers favorable to passive congestions, low inflammations, and other serious complications. A remedy, therefore, that promises to moderate the intensity and shorten the duration of this morbid heat cannot fail materially to influence the progress and termination of our petechial typhus.

ART. III.—TREATMENT OF IDIOPATHIC TETANUS BY CHLORAL HYDRATE. By GEO. THOMSON, M. B.

[NOTE.—Several reports of the successful treatment of tetanus by the hydrate of chloral have been published. Much of what is written of the therapeutic application of this remedy should be received with caution. The comparative novelty of this medicine, the enthusiasm it inspires, and the desire of so many to use reports in regard to it as a means of bringing themselves before the medical public, all conspire to produce many and varied papers in connection with it; yet if it can in any manner serve to lessen the suffering and diminish the mortality of tetanus, every successful report of its use for this purpose should be carefully studied. The following case, from The Lancet, deserves attention.]

J. S., twenty years of age, came under my care on the 27th September after being treated for a week by another practitioner. I found him lying on his back, with slight opisthotonos, unable to open his mouth further than would admit a penny edgeways, the brows knit, corners of mouth slightly drawn up, and the abdominal muscles rigid and hard as a board. The bowels were constipated, having been once slightly opened by repeated doses of purgatives. The urine was very scanty, and voided at long intervals. The pulse 96, the temperature 100° F.

I ordered a draught containing thirty grains of chloral hydrate, with directions to administer beef tea and brandy after he should awake, and follow by another similar draught.

The patient slept two hours after the first draught, and six after the second, when the opisthotonos was gone, and the patient could open his mouth to let in a pencil-case, and felt much better. Pulse 68, temperature 68·5° F.

The thirty-grain doses were ordered to be continued along with beef tea and brandy whenever the patient awoke.

September 29th. Patient feels much better, is hungry, and can open his mouth pretty well. Abdominal walls still very rigid. The treatment to be continued, and a purgative draught at night.

30th. Bowels have moved well, and urine is now coming freely. Pulse 60, temperature 98·5° F. Continue treatment.

October 2d. The symptoms seem now to have disappeared, the abdominal walls being relaxed, and bowels opening naturally. Discontinue the chloral draught.

2d. About 2 a. m. the jaws came suddenly down on his tongue, and he complained of a feeling as if a cord were drawn up his back. Repeat the draught with a purgative.

The patient now improved steadily, twice having large and offensive stools with scybala after purgatives, until the 12th of October, when the chloral was again discontinued. I ought to mention that the drug gradually lost power, and was increased first to forty-five grain and then to sixty-grain doses, which last sometimes failed to produce sleep. The patient was now treated by quinine and good diet, and rapidly regained strength. He had, however, several very severe attacks of cramp in the muscles of the calf of the leg for some days after the discontinuance of the chloral.

At the present date (October 31st) the patient is in perfect health. The effect of the chloral in giving comfort and relief from pain to the patient was very noticeable in this case, he frequently begging for his draught. From the 2d to the 13th of October, when he was getting sixty-grain draughts three or four times a day, his appetite continued good and improving, and his bowels latterly moved once or twice in the twenty-four hours.

CLINICAL LECTURES.

"Ex principiis nascitur probabilitas: ex factis, vero veritas."

ART. I.—MANUAL PRESSURE APPLIED THROUGH THE RECTUM AS A SUBSTITUTE FOR THE FORCEPS IN BREECH PRESENTATION.

By John E. WALKER, M. D., Greensboro', Ga.

Case 1st.—Mrs. S., primipara, aged twenty-four. I was called May 27, 1867, and found her in labor; pains regular and at intervals of twenty minutes, gradually growing shorter as the labor progressed. After three hours the membranes were ruptured, and I was to determine *certainly* the position, which I found to be the breech. In such presentations I had met with average good success, and of course felt no great amount of anxiety. The labor progressed favorably until the entire body was born. I used the common means to prevent pressure on the funis, drew down the chin, carrying the body in the curve of Carus, and making as much traction as I could with safety to the child. The pains were vigorous, but they made no impression; the soft parts became rigid and grasped the head firmly, and would not allow it to descend. My forceps were at some distance off, and no time could be spared in this emergency. The thought occurred that if I could raach the crown and press it downwards I could complete the delivery at once. I thought I might do this per rectum. I had the patient placed on her *right* side; holding the child with my left hand, I introduced the index and middle fingers of my right hand into the anus without difficulty; placed them on the child's head, when by firm pressure thereon, assisted by the efforts of the mother, I had the satisfaction of completing the delivery in a very few seconds, and presenting to the young parents a large, and healthy boy.

Case 2d.—Mrs. V., primipara, aged seventeen years, taken in labor about noon, October 13, 1869. I was summoned about 5 o'clock; found everything in as favorable condition as I could wish, but after the membranes ruptured I discovered that the breech presented—the child was large and strong, the mother vigorous and cheerful. I gave notice that at a certain signal I wished her turned on her right side, for reasons which I would explain at the proper time. When the shoulders had been expelled I had her turned as directed. I carried the body in the curve of Carus, brought down the chin by the usual method, but the expulsive efforts were powerless to relieve the head. I introduced the index and middle fingers of right hand into the anus, which lay stretched across the child's face like a valvular opening. I was thus able to reach the crown, upon which I *bore down* with *considerable* force, directing the mother to use such efforts as she could to aid in the expulsion, and had the satisfaction to complete the delivery in less than ten seconds, the child crying out vigorously.

Case 3d.—Mrs. J., multipara., aged forty-two years, at or about the completion of her eighth month was suddenly seized with labor, the membranes rupturing without previous symptoms, while she was standing beside the breakfast table. I was summoned at once, and was at her bedside in a very few minutes; learned that she had felt no motions for a month; they had never been vigorous. There was a peculiar fetor arising from the liquor amnii. An examination disclosed the fact that the breech presented; the labor progressed slowly but regularly. Allowed chloroform in moderate quantities. When the body and shoulders were born the head was disposed to linger, as the child was dead (the cuticle being stripped off a great portion of the body, etc.) I made considerable traction in the axis of the inferior strait, but to no effect. This lady had hæmorrhoids, but notwithstanding I introduced my fingers, as in the two first cases, into the rectum; then pressing firmly on the crown of the head, I completed the delivery in a very few seconds. She recovered without a bad symptom.

Case 4th.—Mrs. B., aged thirty-five, has borne several children; is suffering from phthisis pulmonalis. December 13, 1869, was taken with alarming uterine hæmorrhage at or about the twenty-seventh week of her pregnancy. I was called, and reached her in two hours; found her very much exhausted; the hæmorrhage had somewhat abated, but she was evidently in labor. This progressed irregularly for several hours; she took cordials; ultimately the membranes ruptured, and I was able to discover that the breech presented; as the case progressed the hæmorrhage ceased. After a reasonable time the body of the child was born. The woman being on her left side, I attempted to use my left hand, but failing, I desired the patient (assisted by female attendants) to turn on her right side. I then introduced two fingers of the right hand, as in the three other cases, and delivered the head in a very short time, the child being alive, and lived thirty hours.

Thus I have given four cases—three within a few weeks of each other—in all of which this method, for which I claim originality, has fulfilled my desire. I may state that in each of these cases the face looked towards the sacrum, but I can see no reason why it may not be applied when the position is reversed. In adopting this practice care ought to be taken that the nails are closely pared, so that injury may not be done to the bowel. I am satisfied that this practice will supersede the use of forceps, and is far less dangerous to mother and child. With it I do not expect to lose a single child nor injure a single woman.

I have examined a number of authors, and find no one has practiced it; and therefore I shall claim priority in the discovery until some one proves his claim to be better than mine.

NOTE.—Since writing this report several months have elapsed, and during this time I have found the following passage in Hodges' Obstetrics, page, 200:

"This is the critical moment as regards the life of the child; delay now is very dangerous, not because the cord is greatly

compressed, but because the functions of the placenta have almost universally ceased; the uterus, empty of the child, has contracted sufficiently, in ordinary cases, to detach the placenta, and of course to destroy its functions. The danger is much greater in primiparous patients, where the perineum is rigid; and in all cases where, from the size of the child's head or other cause, any delay is experienced. Our practice, therefore, in such cases has been when the face is upon the perineum to pass one or two fingers into the rectum, which will enable us very efficiently to increase the flexion of the head, and at the same time to diminish the liability to injury of the perineum. We feel very confident that, by these simple manœuvres of carrying the body of the child in front of the pubis, and by pressure from the rectum, a rapid delivery can be very universally facilitated in perfect accordance with Nature's laws; the chin of the child being thus brought to the centre of the orifice of the vagina, and the cervico-bregmatic circumference parallel to its plane."

He writes in another place as follows (see p. 99):

"Should there, however, be any great delay at this juncture, still further assistance may be rendered by traction upon the body of the child by the practitioner or his assistants directly upward—that is, with the neck parallel to the symphysis pubis. A moment's consideration will exemplify the great mechanical efficiency of traction thus established at this juncture when the face is on the perineum, the top of the head on the rectum, supported by the fingers of the practitioner. Traction thus made acts through the medium of the neck on the whole head, and draws against the symphysis pubis. The base of the occiput is, however, immovable, and hence all such traction must have the effect of determining the anterior part of the head nearer the chest of the child; in other words, to augment flexion and to assist the bearing-down efforts of the mother in propelling the head. In this way we, in the language of the mechanician, use the head as a lever of the third kind, the fulcrum being at the base of the occiput, the power acting through the spine, while the resistance is at the forehead."

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

ART. I.—PROCEEDINGS OF THE LOUISVILLE OBSTETRICAL SOCIETY AT ITS MEETING December 13, 1870. [Reported by the Secretary, Dr. MORTON.]

Dr. Newman exhibited to the Society a very ingenious instrument designed by Dr. David Cummins, of this city, for making wire sutures in the operation for vesico-vaginal fistula, and made by Charriere, of Paris, under his immediate instructions. Dr. Newman had just used the instrument with complete satisfaction. The use of the canula-needle in this operation is not new; the modifications, however, made by Dr. Cummins on the instrument generally used constitute a greater improvement upon that than it was upon the ordinary surgeon's needle with forceps. Indeed this instrument, with its case of needles of every desirable curve, is complete, and the operation for vesico-vaginal fistula, which before had been so tedious, is now not only a very simple but a very easy feat in surgery.

The instrument is used after the following manner: The end of the silver wire is inserted in the perforated handle (the perforation being slightly greater in diameter than that of the wire ordinarily used in the operation for which the instrument is designed) and pushed forward with the thumb and finger until it passes the toothed wheel seen in the cut, where the tube through which the wire passes becomes an open groove, so that the little wheel, which is held up by a spring, may be pressed down upon it by the thumb.

By turning the wheel now towards himself with his thumb the operator can propel the wire forward into the stem of the instrument. A needle may now be attached by inserting its butt into the hollow end of the stem over the small tube which carries the wire seen projecting in the cut. The end of the stem is slit up the length of a few lines, and has its inner surface cut with longitudinal serrations to fit in corresponding serrations cut in the butt of the needle, so that when the slide seen in the cut is pushed forward the needle is firmly clasped and prevented from turning when the instrument is used. After the operator has transfixed both lips of the fistula, he turns the wheel and readily feeds the wire through the needle, and when a sufficient length has been forced through, he gently withdraws the instrument, pulling the wire with it, until he has length enough projecting from either lip to be easily manipulated, when the sutures are to be secured. Or, as there is danger of cutting the parts by drawing the wire through them, a few inches may be fed through and held with forceps while the instrument is withdrawn, the wheel being turned at the same time until a sufficient length projects from the lip in which the instrument was entered. By this means the wire is not drawn through the tissues at all. It may now be cut with a pair of scissors, and the end projecting through the needle drawn back, when the instrument is ready, armed for use again.

The instrument and some of the needles are represented in the cut with moderate accuracy. The instrument, however, is about an inch and a half longer than the representation, the needles being about the same size. There were about two dozen needles in the case exhibited by Dr. Newman of such a variety of curvature as to render the instrument applicable under every conceivable condition. It may be readily seen that the instrument is just the thing for staphyloraphy, the needles, however, with double curves (especially suitable in this operation) are not represented in the cut.

In this description minute details are given, because in them

are set forth the many points of excellence in the instrument.

Dr. Newman next read the following paper on

CHRONIC OVARITIS.

As but little has been said on this subject by the writers on gynæcology, it is important in the very beginning of the consideration to inquire whether chronic ovaritis is of rare occurrence and of little importance in its nature and consequences, or whether it is so obscure in its character and manifestations as to have escaped the careful attention of these writers. It cannot be unimportant; for if the ovaries are of that supreme power in the female economy that we are taught by modern physiology to believe they are, if the woman's physiological, psychological, and moral characteristics are formed and controlled by their power when in a state of health and activity, it cannot be doubted that they must (when affected with disease, especially inflammatory disease) exert an equally profound disturbing influence.

That inflammation of the ovaries is comparatively rare might be inferred from their location and other circumstances. They are situated in the depths of the pelvis, and are completely surrounded and protected by important soft parts. But, on the other hand, reflecting on the active physiological offices which they have to perform—offices which involve an extreme degree of irritation and congestion, with the rupture of Graafian vesicles—they should not be expected to be so entirely exempt from inflammatory disease; so that although chronic inflammation of the ovaries may not be of frequent occurrence, it is, nevertheless, of more frequent occurrence than is generally believed, and it is highly important in its nature.

It is necessary to discriminate between the chronic and the acute ovaritis. Acute inflammation of the ovary occurring suddenly after some violent cause, attended with intense pain and congestion, and tending rapidly to suppuration, must not be confounded with that state of moderate pain and congestion and the slower alterations of structure which constitute chronic

ovaritis. While the acute ovaritis is violent in degree and tends rapidly to the production of abscess, the chronic, on the contrary, is slow in its progress, and is not inclined to abscess. In chronic inflammation the products are so slowly formed that nature, it would seem, is equal to the work of repairing the injuries almost as fast as they are inflicted.

Although chronic inflammation does not tend to rapid and extreme softening or breaking down of the tissues, there is still more or less softening, and this process extending too far may cause the blood vessels of the part to rupture, thus giving rise to extravasation and acute inflammation. The development of the Graafian vesicle may be retarded or accelerated by chronic ovaritis. They may become excessively developed, constituting ovarian cysts or ovarian dropsies.

But the most frequent and important change that occurs in the ovary, as a consequence of chronic inflammation, is atrophy. It is said that hypertrophy never occurs. Certain it is that atrophy is the rule. This relates only to the substance proper of the ovary. It will be shown further on that enlargement occasioned by exudation, extravasation, or something else, is one of the signs of chronic ovaritis.

It may be asked by those who deny the frequency of ovarian chronic inflammation and insist on the greater frequency and importance of uterine inflammation, do not evidences the most positive of uterine disease exist in nearly all of the cases of so-called uterine disease, and do not the secondary or constitutional troubles disappear as soon as the uterus is restored to a healthy state? It is necessary to examine these questions carefully in order to see how far they are true. The ovaries can scarcely be affected with chronic inflammation without the uterus, sooner or later, participating in the inflammatory action, just as it is true that inflammation of the uterus may be transmitted along the ligaments or the fallopian tubes to the ovaries. In the treatment of these cases it no doubt frequently results, owing to the intimate association of the uterus and the ovary, that the remedies employed for the one will effect, even cure, the

other. This is especially true as regards the general treatment. The local treatment of inflammation of the uterus often consists of such remedies as would be indicated in the treatment of chronic ovaritis, as the caustic applications, which, by their revulsive or substitutive action, tend to cure chronic inflammation of the ovary.

Clinical records alone can settle the matter as to the frequency of chronic ovaritis; but while this is true, one should not assume that chronic ovaritis is of such infrequent occurrence. It will not do to assume that in the consideration of the so-called uterine disorders—that because some lesion is found upon the uterus—that therefore the whole trouble is due to this uterine lesion without examining the ovaries at all. It is not denied that many of the disorders of the uterus are capable of profoundly disturbing the entire system of the woman; but the teachings of modern physiology will justify the statement that these general disturbances are, in not a few of the cases, caused or produced through the agency of the ovaries.

How are cases of chronic ovaritis to be diagnosed? Slight pain in the ovary—which is increased by gentle pressure along with enlargement and an uneven or nodulated appearance of the ovary, to be detected by vaginal or rectal touch—may be set down as the first indications of chronic ovaritis.

But the most important sign or symptom is an extreme degree of constitutional or general derangement. The uterus, when not enlarged or displaced so as to afford pressure upon the surrounding nerves, has little power to awaken reflex disturbances. When, therefore, these secondary disorders arise they should most generally be referred to the ovaries as their source.

Another interesting sign of chronic ovaritis is hypersecretion of the lining membrane of the uterus. These secretions or excretions are mucus and the menstrual blood. Many of the cases of excessive discharge of mucus from this surface are due to chronic inflammation of the ovaries. So also are menorrhœa and metrorhagia due to the same cause if the monthly discharge

of blood from the lining membrane is influenced, as it seems to be, by the power of the ovaries. The full extent of this power is not understood; but it is awakened by the irritation and stimulation of the ovaries, and this irritation and stimulation are supplied by chronic inflammation as well at an intermenstrual as at a menstrual time. That serious lesions of the ovaries which shall destroy ordinary functions will cause amenorrhœa, is no argument against this rule.

It will be understood that unless healthy ovulation can be performed, and unless the lining membrane of the uterus shall be undisturbed by the diseases of the ovaries, fecundation and pregnancy are impossible.

Dr. Hornor, speaking of the connection implied between the processes of ovulation and the disease in question, said he could not believe the complaint to be as frequent as the author of the paper seemed to contend. Certainly such could not be inferred from the pausity of literature upon the subject. If it be true that chronic ovaritis is rare, the fact is somewhat strange, considering the functional activity of the ovary during a long period of the woman's life; true, ovulation is a physiological act, but the balance between physiological and pathological powers is so delicately poised that but a slight exaltation of the former is sufficient to establish the latter; and in this instance we have the conditions necessary to effect such a result. But such a theory will not obtain in those cases where the cause is ascribed to sterility dependent upon the absence of menstrual *nisus*, and where the trouble exists because the physiological act has not been able to assert itself. He remarked that in confirmation of certain supposed analogy between the ovaries and testicles, it was claimed by M. Ricord and others that the same relation existed between ovaritis and gonorrhœa in the female, and orchitis and gonorrhœa in the male.

Dr. Wilson spoke of a case which had come under his observation in the Epileptic and Paralytic Hospital in New York.

Margaret G., aged twenty-nine, an epileptic, had suffered several years with symptoms of ovaritis, with some dysmenorrhœa.

At each menstrual epoch a series of convulsions occurred, and on one occasion a considerable quantity of very offensive sanious matter was discharged through the vagina. No treatment availed anything, and she finally died in a prolonged attack of convulsions. Post mortem examination was made, and the ovaries were found to be filled with cysts which contained dark, sanious fluid. The left fallopian tube was firmly adherent to the ovary and sacculated, being distended by the same sanious fluid. There had evidently been very extensive inflammation, involving both ovaries and fallopian tubes. The coincidence of the menstrual season and the epileptic attacks made it appear highly probable that the latter originated in the diseased condition of the genitalia.

Dr. Wilson thought chronic ovaritis not so rare as was generally supposed, being frequently undetected because unsuspected.

Dr. Octerlony then reported the following cases, with the remarks appended:

Case 1. *Subacute Ovaritis During the Puerperal State.*—Mrs. ——, aged thirty-five, was attended by me in her third confinement; labor was slow, but otherwise normal. She is a dark brunette, large and very corpulent, and had always enjoyed robust health. Her husband had been unavoidably absent from his home, in Louisville, for several years, and had returned about ten months before her confinement. I have reason to believe the marital rites had been very frequently performed, not only immediately after his return but throughout almost the whole course of her pregnancy, but she had not complained of ovarian symptoms before the birth of the child.

The puerperal state was perfectly natural up to the sixth day, when she had a chill, and complained of severe and steady pain in the left iliac region; there were occasional sharp, shooting pains and tenderness under pressure over the lower part of the abdomen. Any movement aggravated the pains, but she could bear the weight of the bedclothes, and her knees were not drawn up.

There was numbness of the left limbs, constipation of the bowels, and a general sense of heaviness and bearing down in the pelvis. She had backache, fever, a furred tongue, and some nausea.

The lochial discharge was not materially changed either plus or minus.

Exploration per vaginam revealed that the uterine neck was displaced to the right. On its left side I could feel a hard, globular tumor, painful and exquisitely tender. The vagina felt moist, but very hot. When she had been under treatment for two days the abdomen became less tender. I then easily ascertained by percussion and conjoint manipulation that the left iliac region was occupied by a globular tumor probably the size of my clenched fist. The uterus, which was somewhat tender to the touch, could be distinctly recognized to the right of the ovarian tumor; it appeared to be of the size usual at this period of the puerperium.

The treatment consisted in full doses of opium, and the external application of mercurio-belladonna ointment and hot flaxseed poultices. These were continued four days, when the ointment was omitted and the quantity of opium given was diminished. A succession of blisters over the left ovary were applied, but in the meantime the patient progressed quite favorably. In two weeks from the day of the chill she was convalescent, and in the third week she sat up.

I have since then (1865) lost sight of her, but have been told she complains at times of ovario-uterine symptoms; has lost much flesh, and looks in bad health.

Case 2d. *Chronic Uterine Inflammation, Retroflexo-Version, Dysmenorrhœa and Menorrhagia, Subacute Ovaritis.*—Mrs. L. K., aged twenty-eight, tall, somewhat thin, pale blue eyes, light hair; has had seven or eight miscarriages, the earlier ones took place in the third month, latterly she has miscarried in the second month. At each time she has lost a great deal of blood, so as to become quite anæmic. Apparently very slight causes

seem to have determined this premature expulsion of the ovum. I was struck with this fact at my first visit, and when I subsequently found her uterus in a state of retroversion and flexion, and with cervical and corporeal endometritis, I concluded that these frequently repeated miscarriages at very nearly the same period of pregnancy were due to the condition of the uterus, which prevented the expansion of the organ necessary for the continuance of gestation, or perhaps to the permanently unhealthy state of the lining membrane of the uterus, rendering the normal formation and growth of the secundines impossible. She has been in bad health for years back, and besides other uterine symptoms she has suffered from menorrhagia. I could elicit no symptoms referable to the ovaries.

She was put on tonics—viz., the gentle preparations of iron and cod-liver oil, and local applications made every week; after two months' treatment her general health had improved considerably. The inflammation had yielded in great measure, but the uterus, though easily replaced with the sound, could not be retained in its normal position—it always returned to its former state of retroversion and extreme retroflexion. I dared not resort to the stem pessary on account of the unhealthy condition of the uterine lining membrane, but each week I replaced the organ with the sound, which was then left in situ for half an hour. The instrument was of course introduced, with its curvature adapted to the flexion of the womb. I would then turn the handle, causing the point of the instrument to sweep from right to left over the upper and posterior surface of the cavity near the fundus. The concavity of the sound was then made to look toward the pubes, and the convex surface toward the hollow of the sacrum. This procedure overcame the displacement for the time, and had been tried repeatedly without causing much pain either during or after the examination. On one occasion, however, soon after the customary operation, she complained of severe throbbing and shooting pain in the right ovarian region. The pain extended down the inside of the right thigh to the knee. In the right iliac region there was tenderness under

pressure, and some tenesmus; the abdominal pain was aggravated by the slightest motion; the uterine neck was not painful but when pressed from right to left she complained of pain in the right ovary. She had some fever. The next day I found her in the same condition, and for several days the symptoms continued unabated. On examining per vaginam and rectum, assisting with the other hand over the abdomen, I found in right ovarian region a hard, tender swelling the size of a hen's egg. Under appropriate treatment the ovarian inflammation subsided, and in the course of a week the organ had become much reduced in size, though it was still tender; at the end of the second week very little enlargement could be made out, and there was scarcely any tenderness; at the following menstrual period there was a slight relapse. In fact, this has occurred several times, though the symptoms had always been less severe than on the first occasion. The relapses have usually nearly coincided with a menstrual period, especially when she had taken undue exercise during or immediately before, or too soon after, menstruation. At these times the flow has always been very profuse and protracted. I never used the sound again for the purpose of replacing the uterus, but have in her case employed Sims' uterine elevator, and without any unpleasant results.

Chronic Ovaritis of Long-Standing Aggravated by Labor, Complicated with Uterine Inflammation and Displacement.—Mrs. L. P., aged thirty-three, a blonde of nervous temperament. She was married five years ago, and has been healthy and active. At the time of her first menstruation she was greatly frightened by the appearance of the bloody discharge, the nature of which she had never been told. Her nervous system received a severe shock from which she did not rally for a good while. Menstruation was perfectly regular before marriage, but always attended with great pain, which was invariably referred to the left ovarian region, radiating from that point and extending down the inner side of the left thigh. The pain was sometimes sharp and shooting, at other times dull and aching, and

often made her extremely nervous. Her first labor was very protracted and difficult, the child was delivered with forceps, and was still-born; the perineum was badly ruptured, and the rupture was not stitched up. For six weeks after delivery there was paralysis of the bladder, and the catheter had to be used daily during the whole of this time. She made a very slow recovery, and soon after getting up was treated a short time for uterine disease. When the menses returned she again complained of ovarian pain, and other symptoms referable to the ovaries. They were more marked at menstrual periods, but would occasionally manifest themselves at other times. No treatment was ever adopted for the relief of the symptoms. During her second pregnancy she was remarkably well and active; she had an easy labor and made a speedy and perfect recovery. Last summer she was delivered of her third child; the labor was normal, the child presented in the right occipito. postr. position, but this did not much retard delivery, as the child was quite small. Puerperium was natural. Six weeks after delivery I was called in, as she was troubled with a constant sanguineous flow mixed with a muco-purulent discharge. She had become weak and nervous, had persistent and severe backache, appetite had failed, and bowels were very constipated. On making an examination I found a hard, puckered cicatrix occupying the seat of the perineum. There was a slight rectocele, the vagina was intensely inflamed, the womb was retroverted and slightly retroflexed. The cervix was also inflamed, but not much enlarged. Endocervix ulcerated and bleeding, and in the upper part of the canal exceedingly painful to the touch. The lower segment of the cavity of the body was also very painful when touched with the probe. Some of the blood and muco-purulent discharge seemed to be derived from the cavity of the body, which measured three and one-half inches. The cervix uteri was displaced to the right, and on the left side I could feel through the vault of the vagina an ill-defined swelling. By joint manipulation and rectal exploration I could make out a tumor in the left ovarian region; it was tender and painful, and had the size of a

small hen's egg, it gave the patient pain when the uterus was moved to the right; defecation caused pain in the left ovarian region; sitting and standing augmented the pain in the back and ovary, and the latter pain radiated down the inside of the left thigh. The treatment addressed to the uterus and her general health was anodyne; suppositories and warm vaginal injections were the only topical applications used directly affecting the organ. She is now about well; the left ovary has returned to its normal size, as far as I can judge, and is no longer painful.

Subacute Ovaritis, Retroversion of Uterus, Cervical Inflammation and Ulceration.—Mrs. B., a young married woman, with one child about two years old. For some time past she has suffered from pain in the small of her back, deep-seated, hypogastric pain, painful defecation, and constant dull, aching pain in the left ovarian region, with occasional sharp, shooting pain running down the left limb to the knee. She has headache, referred to the crown, and has lost strength and appetite. All these symptoms are aggravated with the return of each menstrual period. On examination I find tenderness under pressure in the left iliac region, with greater resistance to the touch than on the opposite side. Through the fornix vaginæ I can feel a swelling to the left of the uterus, tender to the touch, and more painful when the womb is pressed towards the right side. The same evidence is elicited by rectal exploration. The uterus is retroverted. The os has a velvety feel, and is patulous. The vulva is highly congested, also the cervix and upper part of the vagina. The os has a circular erosion extending into the cervical canal which is filled with a viscid albuminous substance that can be drawn out into long threads, and is very difficult of removal. The cervical ulceration bleeds easily and freely when wiped with a pledget of cotton on the holder. As the parts were very painful I did not introduce the sound. The treatment consisted in hot fomentations, copious warm water injections, and rest in bed. Bromide of potassium in twenty-grain doses four times daily, and a succession of blis-

ters. On the 20th of October, one month after my first visit, the ovarian swelling had entirely passed away. In the meantime she had menstruated without pain, and I have commenced treating the cervical disease, which has also improved in some measure.

Chronic Ovaritis, Amenorrhœa, Epilepsy—Recovery.—Betty C. B., aged eighteen, her father is a dark-skinned negro, her mother a rather bright mulatto. The daughter resembles the father both in complexion, features, and in stature, being rather darker than her mother, and short and plump—inclined to corpulency like the father. She became a patient of mine in the summer of 1868, when I obtained the following statement as to her previous history. For a year past she has been subject to peculiar seizures, characterized by sudden unconsciousness and falling, but without evident spasm—no clenching of the fists nor biting of the tongue, or frothing at the mouth. These attacks usually came on every month shortly before or after the menstrual period had passed. She suffered a good deal during menstruation, and was often very dull at those times. The pain was referred to the left iliac region, and ran down to the left thigh. The flow was generally scanty, and lasted only from two to three days, and was not regular—sometimes not appearing for a couple of months.

Her appetite and digestion were good, though she was somewhat inclined to constipation. On making a careful examination I ascertained that the left ovary was enlarged and very tender. The enlargement was not so great as to displace the uterus, which seemed normal. The tenderness in the left iliac region was very marked, the right ovary was seemingly quite natural. My diagnosis was chronic inflammation of the left ovary, complicated by epilepsy petit mal. The plan of treatment adopted embraced vaginal injections, warm water, suppositories composed of iodide of lead, morphia, and hyosciamus, bromide of potassium sixty grains daily, the application of two leeches to the left iliac region every month at the time when

the flow was due, and a succession of blisters between times. Under this treatment she steadily improved, the epileptic seizures became less frequent, and finally ceased, the flow became regular and more abundant, dysmenorrhœal symptoms disappeared, and tenderness and pain in the left iliac region passed away, and after six months she was dismissed as well. In 1869 she married, and three months after the ovarian trouble returned, and she had two or three epileptic seizures; but under appropriate treatment she again improved, and soon after conceived. She passed through pregnancy and labor without any difficulty except a rupture of the perineum, which was immediately brought together by means of silver-wire sutures, and perfect union by first intention took place. The child (a girl) was perfectly healthy. The labor took place last March, but no ovarian symptoms have manifested themselves since, and she had only one seizure—much lighter than those she formerly had.

REMARKS.

The cases of subacute and chronic ovaritis which I have just reported are in several respects illustrative of the very able and interesting paper on this subject read before this Society to-night.

If it is true that "our knowledge of the subject is at least so far advanced as to make a *thesis* upon it entirely inadmissible," it is also true that only by the accumulation of carefully observed and faithfully reported cases should we endeavor to establish definite and satisfactory knowledge of this disease. I shall, therefore, ask no apology for presenting so limited a number of cases, believing, as I do, that even the records of a single case of chronic ovaritis must prove valuable in summing up the grand total of professional knowledge on a subject that at present seems so obscure.

The records of my cases, as read to you, have been condensed

from my case-book, and while they embrace only the salient points in each case, I believe that nothing of importance actually observed by me has been omitted. Some of them appear incomplete, the reason of which is that I wished to include nothing that did not have a practical bearing upon the disease now under consideration. Three out of my five cases illustrate different types of chronic ovaritis—three were subacute in character. I use the word "subacute" in its general acceptation, not in the sense employed by Dr. Tilt, who makes it synonymous with "chronic." The first of the subacute cases was one of puerperal ovaritis; the second was probably brought on by the use of the uterine sound, and is an instance of subacute ovaritis due to mechanical violence. The chronic cases were, respectively, illustrations of dysmenorrhœal (No. 3) and of amenorrhœal ovaritis (No. 5). No. 4 was a case of subacute ovaritis co-existing with inflammatory disease of the cervix uteri without seemingly being dependent on the latter, for she had recovered from the ovarian trouble long before the cervical disease had been cured. It is more probable they were due to a common cause, which could not with certainty be made out.

I believe chronic ovaritis is a very common disease; uterine disease very frequently co-exists, and cases of simple and uncomplicated ovarian inflammation are comparatively rare. It occurs only during woman's menstrual life, and is most frequently seen when menstruation has been but recently established and during the period of greatest functional activity of the ovaries. Towards the catemenial decline chronic ovarian inflammation is more rarely observed, and seldom originates at this time of life unless the glands begin to receive the sexual stimulus at the time when their physiological functions should cease.

The ages of my cases were, respectively, thirty-five, twenty-eight, thirty-three. No. 4 is reported as a young woman with one child about two years old; No. 5 was eighteen years old.

The reproductive function was, to a certain extent, interfered with; how much will be seen at a glance by the following

recapitulation: Case 1.—Subacute ovaritis (puerperal) has never conceived since the attack. No. 2. Subacute ovaritis, with several important uterine lesions, has never conceived since the attack. No. 3. Chronic ovaritis of long-standing, has borne three children. No. 4. Subacute ovaritis, has, to the best of my knowledge, been sterile since the attack. No. 5. Chronic ovaritis, amenorrhœa, epilepsy, recovery, married, had one child in March, 1870, but has not since conceived. In four out of my five cases the left ovary was the one affected. In the fifth, in which the inflammation was of traumatic origin, the right ovary was the one involved.

In his enumeration of the symptoms of chronic ovaritis my friend (Dr. Newman) does not mention pain running down the inside of the thigh of the affected side. This, though subject to some variation as to character and extent, was present in all my cases, and constituted a rather prominent symptom.

The diagnosis of chronic ovaritis from distension of the fallopian tubes, ovarian pregnancy, and ovarian cysts, may be difficult sometimes. In my own cases, however, it was easily made.

It has often been urged by those who do not believe in the existence of independent ovarian inflammation that the subjective phenomena attributed to this disease are very nearly those of chronic inflammation of the uterus. While I object to the view which deals with the different inflammations of the uterus as a unit, I acknowledge that the similarity of symptoms in chronic ovarian and uterine disease is often very great; but a physical examination usually suffices to reveal the existence of ovarian disease when present.

I have sometimes found one or both ovaries tender and painful from reflected irritation in cases of uterine disease.

When these ovarian symptoms depend upon disease of the of the womb they will disappear with the cure of the latter; but when they remain after it has been removed, there is usually some morbid change in or about the ovaries to account for them.

Atrophy as a result of chronic ovaritis is very rare, and when it occurs, belongs to a very late stage of the disease.

Amenorrhœa, in chronic ovaritis, is not necessarily a sign of atrophy, for, as well known, ovulation and menstruation are suspended during pregnancy, when the ovaries are greatly increased in size and while menstruation is in abeyance, ovulation may be regularly and actively going on, as is evinced by the fact that during the amenorrhœa of lactation a large number of women conceive. That ovaritis may originate ovarian cysts is possible; that it generally results in cystiform degeneration of the ovary I feel justified in denying, for ovarian cysts are usually a primary cystic degeneration, and, so far as my inquiries go, no case of ovarian dropsy has had a clinical history in which the symptoms of chronic ovaritis were present.

Dr. Newman insists that the treatment proper in chronic uterine disease is also adapted to the cure of chronic ovaritis, and that under treatment directed to the uterus co-existing ovarian disease has also been cured.

Admitting the truth of the last statement, especially in cases where the uterine is the primary disease and the ovarian secondary, depending upon it I must still deny the propriety of the first.

Among the causes of ovarian inflammation are many of the appliances for the treatment of uterine disease, such as intra-uterine injections, stem pessaries, the hysterotome, uterine sound (as illustrated by my second case), and lastly, the use of caustics to the neck of the womb. Many cases illustrating the injurious effects of all these in exciting ovarian inflammation are found scattered throughout the literature of uterine pathology; and when ovarian inflammation already exists, these applications are, as a rule, positively contraindicated.

The treatment adopted in the cases above reported is that which has most recommended itself to me as best adapted to meet the indications in this disease. It may require modification according to the type of the inflammation, but in the main the principle would be the same. In patients with menorrhagia ovaritis

I have found marriage injurious, but in young women suffering from the menorrhœal type of the disease marriage has been well borne, and even beneficial.

Professor Thomas remarks in his excellent work on the Diseases of Women "that a dogmatic treatise on ovaritis in the non-puerperal woman is, in the present state of science, impossible. So much concerning the disease is unsettled, and such utterly discordant views are entertained upon it by the most reliable authorities that too great caution cannot be observed in treating of the subject, lest theories constructed upon analogical reasoning be made to pass current in the mind of the reader for facts faithfully observed at the bed-side and in the dead-house."

On a subject where so much confusion prevails—respecting which what is definitely known amounts to so little, and what is still unknown so much—we are justified in offering even such a small quota of bedside observation and reflection as ours. Perhaps it may be said in truth even such an humble contribution may not be entirely valueless; if so, our aim is already fulfilled.

TUSKALOOSA MEDICAL SOCIETY,
TUSKALOOSA, ALA., January 3, 1871.

At the regular meeting of the Tuskaloosa Medical Society held this evening it was resolved unanimously that the following committee report be adopted:

COMMITTEE REPORT.

The committee to whom were referred the preamble and resolutions of the Montgomery Medical Society, protesting against the policy of the Faculty of the Medical College of Alabama in the abolition of fees for tuition, respectfully report:

That the spirit of said preamble and resolutions, as far as they contemplate a higher standard of excellence on the part of candidates for the degree of Doctor of Medicine, is highly salutary and commendable, and ought to be, and doubtless is, hear-

tily endorsed by the entire medical profession in Alabama. That this object can be attained, however, by a unform system of charges for tuition, as intimated in the said preamble and resolutions, your committee are not prepared to affirm.

The subject was before the National Medical Association in 1869, and by a unanimous vote it declared its opposition to the policy of cheap schools, and adopted a preamble and resolutions fixing $120 as the minimum amount of gross fees. The following year (1870), however, the same body practically reversed its previous decision by laying the whole matter on the table.

No fact in industrial economy is better established than that every man requires remuneration, in one form or another, for his labor; and since professors in medical colleges (by the admission of Professor E. S. Gaillard, himself a distinguished writer and teacher of medicine) "recognize that there is no vestige of honor left in the office of teacher, as a monied reward becomes their chief inducement for this enormous labor," it may well be doubted if the *free system* inaugurated by the Faculty of the Alabama Medical College is calculated to accomplish any good result in the reform of medical education generally. On the other hand, under the present system of *uniform charges* advocated by the Montgomery Medical Society, and which obtains for the most part among the American colleges and universities, the requirements for graduation are deplorably and disgracefully low. Where teachers are dependent upon the number of pupils in attendance and the amount contributed by them for tuition, the temptation to lower the standard is too strong to be resisted, as the history of the medical colleges of the present day too plainly and painfully attests. Either system, therefore, is to some extent objectionable.

The whole subject of medical education in this country requires thorough ventilation, and it is fortunate perhaps that the Montgomery Medical Society has early directed public attention to it in Alabama. Upon so important a question your committee feel great reluctance in expressing an opinion, but with reference to the issue involved in the action of the Faculty

of the Medical College of Alabama they feel satisfied that the abstract question of tuition charges, whether they be large or small, is not an important factor in the solution of the great problem. In the best European schools, where the organization, curriculum, and requirements for graduation leave nothing to be desired, the system of free tuition universally prevails,* and yet, as justly argued by the Montgomery preamble and resolutions, no good results will probably follow its adoption by the Faculty of the State Medical College in Mobile under its present organization.

Without wishing to appear presumptuous, your committee incline to the belief that the desired reform in medical education can only be secured by divesting the present systems, without reference to their respective rates of charges, of their tendency to deteriorate into *private enterprises for the sole benefit of teachers.*

Your committee still more diffidently advance the opinion that the Alabama Medical College should be owned and supported, as other elemosynary and educational institutions are, by the Sate, and should be controlled by the State Medical Association. Its Faculty should be compensated and made independent of patronage, as teachers in other colleges are, and tuition should be free. Physicians from other States and graduates from other colleges, to practice medicine in Alabama, might be required to pass a satisfactory examination before the Faculty of this college. This last suggestion, while it embodies in a practical form the popular idea of establishing a Board of Medical Censors, and guarantees to the people of the State at large a corps of reliable physicians, into whose hands their lives may safely be trusted, offers the strongest inducements to medical students in Alabama to encourage and build up a medical college of their own.

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* This is a most serious and unquestionable error. It costs any one to graduate in Paris nearly $400 in gold, and in other countries the fees are very nearly as large—larger than they are in America. E. S. G.

Your committee are aware of the magnitude of the changes proposed and the difficulty of obtaining the necessary legislative co-operation, but are not prepared to deem these impracticable or insurmountable; while the desired result—the establishment of a higher standard of medical education in Alabama—must inevitably and rapidly ensue.

P. BRYCE, M. D.,
J. T. SEARCY, M. D.,
W. A. LELAND, M. D., } Committee.

MOBILE MEDICAL SOCIETY.

The following is the report of the committee to whom were referred the communications of the societies of Merriwether and Montgomery:

The committee, to whom was referred the communications of the Merriwether Medical and Surgical Society and the Montgomery Medical and Surgical Society, protesting against the action of the Faculty of the Medical College of Alabama in abolishing fees for lectures in that institution, beg leave to report that they have attempted to give to the subject the careful and dispassionate consideration which, from its great importance, it unquestionably deserves.

Without attempting to decide whether free medical education is desirable or undesirable in itself, the committee have come to conclusions somewhat different from those contained in the communications in question. The action of the College Faculty which is complained of is, it is true, not in accordance with the resolution relating to the Medical College fees adopted by the American Medical Association at its session in 1869. But inasmuch as this resolution is only advisory, and inasmuch as the charges of more than half the colleges in the United States are less than the minimum amount specified in it, it cannot be esteemed as of much value in the argument.

For the rest there does not seem to be any such relation between college charges and the standard of education as that

which in these communications is so strongly asserted. Many of the higher institutions of learning (both literary and professional, both in this country and in Europe) are free* to all who choose to make use of their advantages. This is notably the case in the great medical colleges of Continental Europe, where students pay nothing for tickets, and the salaries of the professors are merely nominal—so small in many cases they are not drawn at all. Yet it has not come to the knowledge of the committee that it was ever held by anybody that there was anything in all this derogatory either to the students or to the teachers or to the profession.

It seems, furthermore, to the committee that the question of college fees, and indeed of the whole internal management of medical colleges, is one over which the medical profession at large have no jurisdiction; and that the sooner this fact is recognized the better it will be for all concerned. In this direction the experience of twenty years proves conclusively that nothing can be accomplished towards that professional reformation of which so much is to be heard.

The failure is not to be wondered at. Success has not been sought through the proper channels. Let the profession do its duty wisely and bravely—not by railing at the colleges, but by attending honestly and earnestly to its own legitimate business, and we may hope for more satisfactory results. The profession has the right, and indeed it is their bounden duty, in conscience and right reason, to regulate the qualifications of those whom they admit to professional fellowship. Let them do this with clean hearts and strong hands, and they will have little need to trouble themselves about the fees of colleges. If they cannot do this, if with all the strength of their thousands of members they cannot or will not thus work out their own salvation with fear and trembling, the smallest spark of magnanimous feeling ought to be enough to keep them from seeking

* This is a serious error. E. S. G.

to impose the burthen upon the shoulders of a few College Faculties.

The committee cannot see how the inauguration of a free system of medical instruction can prove so disastrous to the cause of medical learning as is assumed in the communications under review, and assumed, too, without any attempt to sustain the assumption by any sort of testimony. It would seem, on the contrary, according to the ordinary course of things, that every device which removes another obstacle from the pathway of the medical student ought to facilitate his progress in medical knowledge.

However this may be, the committee feel assured that no considerations inconsistent with either personal or professional honor have moved the Faculty of the College to the step which they have taken. Of this their past record is a sufficient guarantee. They have always been foremost in every attempt to advance the profession to greater dignity and wider usefulness; and in this connection it ought never to be forgotten that it was from this Faculty (through one of its members) that the proposition was made before the Medical Association of the State of Alabama, where it is now pending, to establish such a system of censorship as will effectually keep incompetent men out of the profession; a proposition which is all the more remarkable because it neutralizes the privilege so dear to all medical colleges of conferring diplomas which carry with them the right to practice medicine and collect fees.

In conclusion, then, the committee can see no reason why the abrogation of fees for lectures in the Medical College of Alabama should furnish occasion to the profession of the State for the grave apprehension expressed by the Societies of Merriwether* and Montgomery; can see no reason why, for this cause, the prosperity of the college should be threatened with ruin or its honorable reputation suffer abatement; can see no reason,

* The editor of this journal will be pleased to [illegible] the transactions of the Merriwether Medical Society.

therefore, why for this cause the protest of the societies mentioned should receive the approval of the Mobile Medical Society.

All of which is respectfully submitted.

JEROME COCHRAN, M. D.,
C. TOXEY, M. D.,
T. S. SCALES, M. D., } Committee.

The foregoing report was made to the Mobile Medical Society at the meeting held on the 19th of December, 1870, by the committee appointed for that purpose; and was adopted by unanimous vote at the meeting held on the 7th January, 1871; when it was also ordered to be printed and communicated to the medical societies of the State.

E. D. GAINES, M. D., President.

E. H. FOURNIER, M. D., Secretary.

ORIGINAL CORRESPONDENCE.

"Si mihi Fas scribere audita."

MONTGOMERY, ALA., January 19, 1971.

Mr. Editor,—Notwithstanding the fact that a great many articles upon the subject of hæmorrhagic malarial fever have been published in the New Orleans Journal of Medicine, I notice that few have appeared in your journal, which, being a monthly, is probably more widely circulated in the South and West than any other medical journal. And as it is of the utmost importance for the profession to become familiar with all forms of disease with which they are likely to come in contact, I have concluded to send you a short paper upon the above-mentioned disease.

I shall acknowledge my indebtedness at the commencement to Drs. Michel, Osborn, Riggs, Ghent, and others, who have written so well upon this (to us of the South) most terrible disease.

To Michel and Osborn I will refer those who wish a full history of this form of malarial fever. Dr. Michel's most valuable paper can be found in the Transactions of the Alabama State Medical Association for 1869, and in the July number of the New Orleans Medical Journal for 1869.

My object is to familiarize the profession with a most formidable disease, and one which may be encountered at any time by any one living in a malarial country. A malady that assumed such a strange and appalling livery when it first made its appearance in this portion of the country as to strike terror not only to the hearts of the people, but made the intelligent physician quail as he felt the responsibility of being brought in contact with a most fearful enemy, and feeling most uncertain as to how he should grapple with it.

Now, if this short article shall perchance be of any benefit to any physician who is yet to encounter the disease for the first time, I shall be paid in full for any trouble that this self-imposed task may have occasioned me.

The cause of this disease is, beyond a doubt, malaria acting for a long time upon the system. The great majority of cases having been sufferers from repeated attacks of intermittent or remittent fevers—occasionally, however, we hear of its sudden onset; but this is very rare indeed, and never, to my knowledge, when the person was in perfect health for some time previous to the attack.

I shall not dwell in speculations as to how this poison acts upon the system, so as to produce this form of fever—my object being entirely practical.

The first symptom is a cold sensation, as experienced in an ordinary chill. Frequently, however, coming on at night, which is different from the usual commencement of an attack of malarial fever.

This cold stage returns regularly in some cases every six, eight, or twelve hours, and is followed always by a corresponding reaction.

Nausea and vomiting usually commences with the first cold stage, and continues to be the most distressing symptom throughout the attack.

The first thing, however, which attracts the attention of the patient and friends, is the appearance of the urine, which is noticed to be bloody the first time it is voided after the commencement of the attack. An ordinary chamber-pot is frequently half-filled at one time; and sometimes enormous quantities are passed in the first twenty-four hours. Little smell or other characteristics of urine are observed.

It is this symptom which has given rise to the name of "hæmorrhagic malarial fever," first proposed by Dr. Michel, of this city, and endorsed by the Medical Association of the State. Other names have been proposed, but as this symptom is always present, in well marked cases, it seems to be appropriate.

In mild cases, where there is a complete intermission, this bloody urine intermits also, returning with each exacerbation. Where there is little remission (for this cold sensation spoken of above frequently comes on without any premonition, and whilst the fever seems to be in full play) it rarely lasts longer than forty-eight or seventy-two hours, and then ceases, whether you give remedies directed to this particular symptom or not.

I wish to call particular attention to this, as I am inclined to think much damage is frequently done the patient by administering medicines that have no other effect than to irritate an already exceedingly irritable stomach.

The next most distressing symptom is nausea. In fact this is the most terrible feature of the disease, frequently precluding all idea of medication or nourishment through the stomach.

The matters vomited are at first yellow; presenting to the naked eye the appearance of black vomit, as we see in yellow fever; but never yielding the characteristic tests of true black vomit.

The skin becomes yellow during the first two hours of the attack, and remains so until death or convalescence. It is so yellow as to present in many cases a bronzed appearance.

Hiccough is another very annoying symptom. Pain in back and loins is also sometimes very troublesome.

The bowels are usually constipated, and when they begin to act the discharges are either bloody in appearance or of a thick tarry nature, very dark, never white or light-colored, showing at least an abundance of the coloring of bile. This is another important feature of the disease.

The diagnosis is never difficult, certainly not after having once seen a case. There is no confounding it with any other disease except yellow fever or jaundice.

It is different from yellow fever, because it rarely attacks persons who live in large cities. *It is a country fever.*

The yellow tinge is from bile, not blood. Jaundice is rarely attended with severe symptoms until it has continued for some time; and the urine, though very dark, is not bloody.

The pathology of the disease, owing to the careful observations of Michel, Osborn, Riggs, Hudson, Ghent, and other gentlemen, who have written upon the subject, is getting to be pretty well understood.

Why the liver should be the principal gland or organ affected, I shall leave to others to explain. It is certainly one point from which the great trouble emanates. Generally the action of the liver is increased ten-fold. In fact the whole system is flooded with bile.

The blood is soon filled with the biliary elements. Quantities of bile are vomited, and the bowels are packed with it; and happily for the patient if the gall bladder does not become so clogged up with it as to prevent its escape through the ductus communis choledochus. The spleen becomes rapidly enlarged, and the kidneys, in their efforts to relieve the poisoned system, bleed sometimes profusely—rarely, however, sufficient to exhaust the patient, though Dr. Michel thinks he lost one patient from this cause alone. It generally lasts long enough to relieve the

congested kidneys, and also frequently gives temporary relief to the patient.

As I have said above, it rarely lasts longer than forty-eight hours. The urine then becoming perfectly healthy and natural in appearance until the death or recovery of the patient.

In a case reported by myself in the January number of the New Orleans Journal for 1870, the patient lived ten or twelve days after the urine became healthy in quantity and color.

In the treatment we have two poisons to contend with. First, the original malarial poison; and secondly, the poison caused by the elements of bile entering the circulation, or, according to Michel, of being retained there.

The first and most important indication is to produce free catharsis and keep the bowels moving all the time. This is an aid to the kidneys in their efforts to remove the poisonous materials from the system. If the stomach is irritable at the start, as is usually the case, calomel in a large dose is the best remedy. It will act upon the bowels, and at the same time be a sedative to the stomach. Magnesia, salts, or seidlitz powders will answer if the stomach will retain them. In a case recently under my charge I let the patient drink freely of Congress (Saratoga) water. The thirst is always intense, and water is generally vomited as soon as taken. The Saratoga water seems to be retained better than plain water, and has the advantage of keeping up a gentle action upon the bowels. Pounded ice may be allowed freely, and is of great advantage to the patient. Soda and mint water may be given to quiet the stomach, or lime water and milk, which has the double advantage of being very soothing to the stomach, and nourishing also.

Quinine of course in this, as in all other forms of malarial fever, is the sheet-anchor, and I think it always preferable in this disease to give it under the skin. You are certain of soon getting your patient under its influence, and do not increase the much to be dreaded nausea and vomiting. I have given as much as twenty-four grains hypodermically within twenty-four

hours. It is important to have as near a neutral solution of the quinine as possible.

Dr. Merriwether, a very intelligent physician of this county, has the quinine rubbed on the skin, using immense quantities in this way. He also gives spirits turpentine in teaspoonful doses, which, he says, controls the vomiting and the bloody urine. He speaks highly of his success by this method.

I think it highly important to keep the bowels moving briskly, and even during the action of medicines you will find the stools almost consistent, or at least thick and tarry; and there is rarely any improvement until the actions become thin and light-colored.

As to the continued use of mercury, I cannot see the necessity of it. You have more bile than you can get rid of, and there is certainly no good reason for administering a remedy which is supposed to act directly by increasing the flow of bile. I think it more useful in quieting the stomach than for anything else. If the stomach can be kept quiet, the bowels moving, and quinine retained in sufficient quantities to prevent paroxysms, your patient stands a good chance to recover. But even then you may look for a large mortality, for in many cases the system seems to be so deeply poisoned as to be beyond the reach of remedies from the first. It is of the utmost importance to begin the treatment early, for if the attack has lasted for a few hours even, in a great many cases you will be unable to administer any medicine by the mouth.

Very respectfully your obedient servant,

J. S. WEATHERLY, M. D.

VICKSBURG, MISS., January 13, 1871.

Dr. Gaillard,—Dr. J. T. Davidson, of Delhi, La., called upon me this morning to examine his eyes. He states that on the 20th of November, 1870, he was attacked with malarial fever. During the first twenty-four hours after the attack he took twenty grains of calomel and about forty grains of quinine, the

latter being rejected. The stomach being very irritable, all treatment from this time until the 28th was directed to the control of that symptom—lime water with milk and the hypodermic use of morphia, and no quinine. On the evening of the 28th the attending physician commenced using quinine by enema, and that by the evening of the 30th (forty-eight hours) 400 grains had been so used; all of which was retained. Soon after the last enema, Dr. Davidson states that he "felt he was becoming blind"; that objects looked black before him, and by the following morning he was entirely blind, in which condition he remained for about seven days. After this he could see the light when the curtains were drawn aside from the window. He has slowly improved from that to this time. Now he can see to read ordinary printed matter slowly, his field of vision not embracing more than one or two words at a time. His pupils are dilated, and he is intolerant of strong light.

From the time the eyes became affected, the Doctor says he did not sleep for four days and nights.

He had had weak eyes for nine years; but at the time he was attacked with fever they were free from any inflammatory affection.

P. F. WHITEHEAD, M. D.

LODORE, AMELIA COUNTY, VA.

Dr. E. S. Gaillard: Sir,—Having had occasion to use the "exploring needle," and not having one at hand, I resorted to my hypodermic syringe. I inserted the blade into the tumor, and as I elevated the piston the *pus* rose readily into the cylinder. I think it the best exploring needle I ever used.

And just here let me suggest what occurred to me whilst using this little instrument—viz., that an instrument can be constructed with this *kind* of *blade* (of sufficient calibre) attached to a pump-syringe with valves that will substitute the *trocar* and *canula*, and have many advantages over that instrument. A pump made after the pattern of the pump-syringe (manufactured by the American Hard-Rubber Company) is just

the thing. The blade to fit air-tight in the end intended for the fluid when being drawn into the cylinder. In the operation of parentesis thoracis in cases of empyema this *instrument* will possess advantages over any other that I am acquainted with.

First—The air cannot enter the thorax or abscess.

Second—No cutting is required (save the puncture).

Third—Fluids can be injected into the cavity *through* the blade without withdrawing it.

Fourth—Fluids (such as warm water, after having been *injected into* the cavity) can be pumped out, thus completing this operation (paracentesis) or evacuating the contents of abscesses without withdrawing the blade.

To inject *into* cavities the *pump* must be removed and the elastic gum tube attached in its stead. By referring to the syringe alluded to above in connection with the blade of the hypodermic syringe, you will see the principle that I have endeavored to explain. There may be thousands like it, but I have not seen such.

Respectfully yours,

J. A. HILLSMAN, M. D.

GREENSBORO', GA., December, 1870.

If some one has not preceded me in the discovery, you may make known through your valuable journal that I operate for *tongue-tie* with a narrow, curved, sharp-pointed bistoury, first elevating the tongue with the forked end of the director or other suitable instrument. I transfix the frænum just where I desire the division to extend, and cut towards the tip or outwards.

The advantages claimed are that the depth of the cut may be graduated. It is more easily performed, is more neatly done, than with scissors, and with less risk of injury or hæmorrhage.

JOHN E. WALKER, M. D.

WASHINGTON, D. C., January, 1871.

The medical profession and scholars generally are aware of the ephemeral form in which most of the early American contri-

butions to the literature of medicine were given to the world, and indeed in which many of the more recent are being published. This condition of much of our professional literature is deeply regretted by all, and particularly by those whose taste and research lead them to refer to this class of works, when the fact is made apparent that whole editions of tracts and books have entirely perished through neglect. With a view to provide against such a contingency, and preserve for the benefit of the profession in some accessible and central locality copies of all home medical publications, the American Medical Association, at its annual meeting in May last, resolved to establish at Washington, D. C., a Library or Repository of American medical works, to which it is believed all the current medical literature of the country will be cheerfully, promptly, and constantly contributed.

It is designed that this repository shall contain copies of every contribution by American physicians to the literature and science of medicine from the earliest settlement of our country, no matter how or where published, including all the books, pamphlets, journals, and even unpublished manuscripts, that can be collected.

Nearly all physicians have some book or pamphlet of the character indicated, which may contain facts relative to the diseases of his section published nowhere else, which they can contribute without inconvenience, and which of itself is of trifling value; yet when many such treatises are assembled together from all parts of our country, embracing its nosology from the earliest period of its settlement, they will form a collection of the greatest importance to the profession.

The secretary (Professor Henry) of the Smithsonian Institute has generously granted the use of a room in that fire-proof building for the keeping and preservation of the library of the American Medical Association, under the charge of its own librarian. The accommodation thus offered the Association for accumulating and preserving its library free of cost is generous

and most encouraging. Gentlemen having scarce and valuable American medical publications will not hesitate to deposit them in such a safe, central, and national repository, where they will be preserved from destruction, and their usefulness secured to the profession.

An appeal for contributions to this library is now made, personally and distinctly, to each and every American physician, medical publisher, and editor, to deposit copies of their works in this repository, where they will be carefully kept for reference, and catalogued with the name of the donor.

Having been selected to carry into effect, as far as practicable, the resolution of the Association to establish a library, we have completed all the necessary arrangements for the reception and preservation of those books which may be sent to our care. Contributions of the class of works mentioned are therefore respectfully and earnestly solicited from every source. Packages may be sent by mail or by Adams' Express to either of us, which will be promptly acknowledged on reception, and a record of titles kept. The library-mark of the Association will be pasted on the inside of the cover of each volume, which will contain also the name of the donor.

Hoping that you may further the project to the extent of adding at least your own productions,

We remain, respectfully,

F. A. Ashford, M. D.,
No. 1330 New York Avenue, Librarian;
Joseph M. Toner, M. D.,
No. 665 Louisiana Avenue, Library Committee.

REVIEWS.

"Judex damnatur cum nocens absolvitur."

ART. I.—PHYSICS AND PHYSIOLOGY OF SPIRITUALISM. By W. A. HAMMOND, M. D., Professor of Diseases of the Mind and Nervous System, and of Clinical Medicine in Bellevue Hospital Medical College. New York: D. Appleton & Co. 1871.

This pleasing and entertaining little book gives, in a most satisfactory and scientific manner, the *coup de grace* to all of the absurd and extravagant claims that have been made for the supernatural origin of those manifestations which are popularly termed "spiritualism." Spiritualism would seem to be too small a foe against which to have directed, in sober earnestness, the weapons of medical and psychological science; but Dr. Hammond has thought otherwise, and the medical and general public will thank him for the good service which he has rendered; his arguments are efficient and satisfactory.

It may be remembered that Faraday also thought this myth, which is termed spiritualism, to be a foe worthy of his steel; and all who are familiar with his experiments will recollect how thoroughly he destroyed the pretentious claims of those dishonest or misguided "circles" in London, whose services disturbed so fearfully the weak brains of the gentlemanly women and lady-like men of the English metropolis.

Dr. Hammond's little volume will be found very entertaining to the general as well as the medical reader.

ART. II.—LECTURES UPON DISEASES OF THE RECTUM. By W. H. VAN BUREN, M. D., Professor Principles of Surgery and Diseases of the Genito-Urinary Organs in Bellevue Hospital Medical College. New York: D. Appleton & Co. 1870.

This exceedingly excellent and useful little volume will give general satisfaction. It is concisely arranged, and in a very

small compass are condensed all of the practical directions and details connected with this important, much neglected, and comparatively obscure portion of surgical literature. Almost every practitioner is practically interested in the diseases analyzed in this little volume; and as brief, practical, and plain instructions are often sought in vain in the larger surgical works, it is a duty as well as a pleasure to call attention to this contribution of Dr. Van Buren. The table of contents is as follows: and all will see how important it must be to obtain recent and reliable instruction in regard to the troubles mentioned, with so small an expenditure of labor and money. The work does not exceed 164 small pages, and will not cost, perhaps, more than $1.50.

Here is the table of contents: Pruritus Ani—Erythema—Herpes—Chronic Eczema—Eczema Marginatum—Oxyris Vermicularis—Hæmorrhoids—Polypus and Prolapsus Ani—Fistula in Ano—Irritable Ulcer—Stricture of the Rectum—Cancer—Diagnosis—Means of Exploration—Neuralgia—Atony—Impacted Fæces—Hygiene—Special Therapeutics.

ART. III.—GALVANO-THERAPEUTICS—THE ACTION OF THE GALVANIC CURRENT UPON THE ACOUSTIC, OPTIC, SYMPATHETIC, AND PNEUMOGASTRIC NERVES. By W. T. NEFTEL, M. D. New York: D. APPLETON & Co. 1871.

The preface to this work is certainly in bad taste—very. It is egotistical to such a degree that the reader examines the work with unavoidable prejudice. There are few physicians who are capable of doing justice to the claims and reasonings of the author, for his chemical and electrical formulas are certainly beyond the ken of any but the expert and specialist. The pathology advanced for many morbid conditions borders upon transcendentalism in medicine, and the phraseology (even to those reasonably familiar with the most pedantic technology

which obscures the pages of current medicine) is so unusual and grotesque as to leave the reader in a double labarynth of wonder and bewilderment. Migraine is a species of hemicrania, the pathology of which is to be accepted as a tetanus of the vaso-motor nerves of the affected side; while the reader is called upon to tread a dangerous highway, upon which he finds, at intervals, these intelligible guide-posts to reassure, to comfort and protect him: "Electro-otiatrics," "paradox-reactions," "anodic openings," cathodic closings," etc., etc. As soon as the patient investigator endeavors, through the agency of his reference works, to determine something approaching to a meaning of these terms; as soon as he is reassured and begins to feel that he is not quite as ignorant as he feared himself to be, the following obstacle is found aggressively objective across his path. After surveying it carefully he falls into a condition of nosological collapse, and almost involuntarily cries aloud for aid; for some one to extricate him from this technological wilderness into which his enthusiasm and spirit of investigations have so disastrously betrayed him. Here is the electrological phantasm which has overpowered and conquered him; and be it understood that many of these phantasms are seen in the shadowy perspective awaiting any one who may have the temerity to undertake the dangerous transit. The following passage may be simple and rational medicine, but the reviewer is not sufficiently educated so to feel and accept it: "I found the left ear affected with torpor; twenty Siemen's elements, with exclusion of the rheostat, called forth no acoustic reaction. Right ear hyperæsthetic; with reversion of formula K a C, K a D, and A n D, remain without reaction. At the K a D, A n C, and A n D, two distinct noises, roaring, and bubbling, which at K a D last indefinitely."

Again, there is found this simple explanation of torpor of the acoustic nerve, with twenty Siemen's elements and exclusion of the rheostat; XXX 2100 K a C s E I; XXX 800 K a C S E I I I. There can be no doubt that the reader, after examining these extracts, will be either profoundly awed in regard to the science

of galvano-therapeutics, or that he will feel, with the writer, that Dr. Neftel is one of gigantic attainments in science, being very properly and naturally (as is stated in the preface) "sent by the Russian Government to Germany, France, and England, to qualify himself for a chair of medicine for medical graduates." The writer is satisfied that if he ever unhappily meets again with any one armed with these galvano-therapeutic formulas he will feel and say, as did the sagacious, Coon when he saw Mr. Crockett standing beneath the tree with his fatal rifle, "If that's you, don't shoot; I giveup."

This notice may be unjust—it is hoped not; but it may save some one purchasing this book and attempting to understand it from the fear and suspicion of ignorance or imbecility.

ART. IV.—A REPORT ON BARRACKS AND HOSPITALS, WITH DESCRIPTIONS OF MILITARY POSTS. By JOHN S. BILLINGS, Assistant Surgeon United States Army. *Circular* No. 4, War Department, Surgeon General's Office, Washington, 1870. Quarto. pp. 494, with 13 lithographed plates and 59 wood-cuts.

If we draw the attention of our readers quite frequently to the publications of the Surgeon General of the Army, it is because they constitute such important additions to the medical literature of the country. When we look back ten or twenty years, and scan the reports of the committee on medical literature of the American Medical Association, and find the lists of new publications filled chiefly with the titles of reprints of English treatises, with the names of the Philadelphia editors in larger type than the names of the authors, or with titles of translations from the French or German, we may well congratulate ourselves that since the close of the war the profession has again had leisure to devote itself to literary pursuits, and that a large amount of original matter is again being laid before us. Besides several important systematic treatises and monographs of interest, collections of

hospital reports, comparing favorably with the British works (on which they were modelled) that have been published in the past five years, several courses of clinical lectures have appeared in print, and have added to the evidence that we are no longer entirely dependent upon foreign sources for a knowledge of the progres of our art and science.

The medical staff of the army has contributed its full share in this forward movement of medical literature. Many of our readers will be astonished to learn how much the Surgeon General has accomplished in this way, for the works published by him being distributed through official channels, and not sold, fail to reach the eye of many members of our profession. Since the close of the war, in addition to many minor publications, the following important works have been published by the Surgeon General's Office:

Circular No. 6.—War Department, Surgeon General's Office, Washington, November 1, 1865. Reports on the Extent and Nature of the Materials Available for the Preparation of the Medical and Surgical History of the Rebellion. Quarto. pp. 166.

Catalogue of the United States Army Medical Museum.—Prepared under the direction of the Surgeon General, U. S. Army. Washington, 1866. Quarto. pp. 960.

Circular No. 5.—Report on Epidemic Cholera in the Army of the United States during the year 1866. Quarto. pp. 65.

Circular No. 7.—A Report on Amputations at the Hip-Joint in Military Surgery. Quarto. pp. 87. 1867.

Circular No. 1.—Report on Epidemic Cholera and Yellow Fever in the Army of the United States during the year 1867. Quarto. pp. 156. 1868.

Circular No. 2.—A Report on Excisions of the Head of the Femur for Gunshot Injury. Quarto. pp 141. 1869.

Circular No. 3.—Approved Plans and Specifications for Post Hospitals. Quarto. pp. 14. 1870.

Report on the Magnesium and Electric Lights as applied to Photo-Micrography. Quarto. pp. 30. 1870.

Report on Certain Points connected with the Histology of Minute Blood Vessels. Quarto. pp. 30. 1870.

Report on the Oxy-Calcium Light as applied to Photo-Micrography. Quarto. pp. 8. 1870.

To these the bulky quarto now before us has just been added. It consists of a preliminary report by the editor and compiler, Dr. J. S. Billings, characterized on every page by evidences of study of sanitary laws as applied to the construction, heating, ventilation, and sewerage of barracks and hospitals. The mortality rates of the American army are contrasted with those of foreign armies, and an immense amount of information is compressed by means of tabular statements into a very brief compass. The whole subject, of what is called "hospitalism" in our day, is discussed with great clearness and in a philosophical spirit, and the results are given of numerous experiments in analyzing the atmosphere of the barracks and hospitals at the principal military posts. A nearer approximation to mathematical demonstration is rarely found in a medical treatise than appears in the paragraph in which the author exhibits from the official records the fluctuation of the mortality at the different posts as hygienic laws were enforced or disregarded.

The compiler's prefatory remarks are followed by a series of reports from the medical officers from all parts of the country, from Eastport to KeyWest, and from the Rio Grande to Alaska. These treat not only of the sanitary conditions of the different stations of the troops, but contain also many interesting facts in relation to the flora and fauna, the geological and mineralogical and meteorological conditions of the posts, as well as some historical data, and make the work not only of professional, but of popular interest. The work is very handsomely illustrated by lithographic maps and wood-cuts. The author's general conclusion appears to be that the United States army is the best fed, the best clothed, and the worst housed of the military forces of any civilized country. We sustain his suggestions for sanitary reform, and trust that they will be heeded by those in authority.

ART. V.—THE AMERICAN JOURNAL OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN. Volumes 1st and 2d. Edited by E. NŒGGERATH, M. D., B. F. DAWSON, M. D., and A. JACOBI, M. D.

The two volumes mentioned of this journal have just been received from Dr. B. F. Dawson, the managing editor. These volumes are very handsomely bound, are as handsomely printed, and as handsomely edited. No journal in this country has achieved more rapidly a deserved and increasing reputation. Its contents are always valuable and interesting, and the very best representatives of these departments of medicine contribute constantly to its pages. The work can be recommended with entire confidence, and all who desire the best and most recent information in connection with the specialties to whose cultivation the journal is devoted cannot do better than by subscribing to have its pages always accessible. It is issued quarterly, and all who desire to subscribe can obtain it through this office for the very low price of $3 annually.

ART. VI.—PARTIAL PARALYSIS FROM REFLEX IRRITATION CAUSED BY CONGENITAL PHIMOSIS AND ADHERENT PREPUCE. By LEWIS A. SAYRE, M. D., New York.

This paper was originally contributed to the "Transactions" of the American Medical Association. It is brief, valuable, and essentially practical. Many cases are given of paralysis caused by congenital phimosis with adherent prepuce, all of them being promptly relieved by the operation described. The pamphlet is well prepared, and it is to be regretted that it should have enjoyed so small a circulation. Dr. Sayre will no doubt take pleasure in supplying any one who desires the paper, and the reviewer can say with confidence that all who read it will be gratified and instructed.

ART. VII.—SATAN IN SOCIETY. By A PHYSICIAN. J. S. Goodman & Co. Chicago. 1871.

It is remarkable that the only filthy literature which has, during the past year, been sent for review to the medical press should be written by physicians. It is lamentable; "'tis true, 'tis pity, and pity 'tis 'tis true." This work abounds in prurient details and obscene descriptions connected with the secret vices, with onanism, with the marriage chamber, etc. As abominable as is Napheys' work on the Physical Life of Woman; it rises (if this be possible) to a degree of actual respectability when compared with the volume just received. Indeed, Satan in Society is a feeble imitation of Michelet's Love. It is inferior to this last utterly abominable work in every respect but one—viz: Its indulgence in prurient and filthy details; here it enjoys a ruinous and disgusting superiority. It is wonderful that any one can be found so debased as to write such obscene descriptions; it is wonderful that any respectable House will print such filthy details, but it is more wonderful that any respectable man can allow such a production to be dedicated to himself. It is dedicated to the Hon. William Sprague, United States Senator.

MISCELLANEOUS.

"Non omnes eadem mirantur amantque."

To the Medical Gentlemen of Virginia.—At the last meeting of the Medical Society of the State of Virginia, held in in Richmond, the following resolution was unanimously adopted, and the undersigned appointed a committee to carry it into execution—viz:

Resolved, That a committee be appointed to address the medical profession of the State in regard to the objects of the Socicty.

The objects of the Medical Society of the State of Virginia are two-fold. The first object contemplated is the collection, diffusion, and the advancement of medical knowledge. The second is to throw around the profession such safeguards as shall require every member to make such acquirements in medical knowlegde as to justify his admission into the ranks of the profession, and to encourage the hope that he will reflect honor upon the cause he thus espouses. It is a source of great concern and regret that the profession we represent has been, of late years, so much injured by idle, illiterate, and unworthy members, and degraded by unprincipled charlatans, whilst the efforts of the true sons of science have been to promote the standard of medical learning, and contribute aid to suffering humanity.

It is to do away with these evils, to expel from the profession and from society the empiric, to make men's health and lives more secure, and to promote unity of action, social and professional good feeling, that we thus address you.

"*Deorum immortalium inventio consecrata est ars Medicæ*," is a motto worthy of adoption. The wisdom of Hippocrates, the patriotism of Warren and Arthur Lee, the inspiring example of the founders of the medical art in America, and above all, the command of the great physician, "to go out and heal the sick," are appeals to every physician in Virginia to contribute a hearty and prompt assistance in the completion of our State medical organization.

We would therefore earnestly solicit the co-operation of every intelligent physician to carry out the closing part of the resolution—viz: that the physicians in every town and county of Virginia shall at once organize county medical societies, and shall require of every member a strict observance of the "code of medical ethics" as adopted by the American Medical Association; that each local Society shall adopt rates of charges suited to their particular locality, and shall require every physician with whom they may consult to subscribe to the same compact.

The undersigned believe that so soon as the above suggestions are brought before the medical gentlemen of the State they will unite heart and hand in promoting the best and highest interests of our noble profession. As soon as the county societies are organized they are respectfully requested to report to the Secretary of the Virginia State Medical Society, Dr. L. B. Edwards, Lynchburg, Va.,

FRED'K HORNER, JR., M. D.,
T. E. BROWN, M. D.

Cause of Gonorrhœa.—Prof. W. A. Hammond, of New York, in his "Lectures on Venereal Diseases," asserts his belief, which he supports by cases, that gonorrhœa may be introduced either by the virus of hard chancre, or by the virus of soft chancre, when the the chancrous matter has been deposited for a certain length of time upon the mucous surface, without any abrasion being present, or without any chancre following. Vaginitis and urethritis may be induced by other causes, but true gonorrhœa owes its origin to the contagion of chancrous pus alone. He also believes that the chancre will be followed by and may impart constitutional syphilis, just as if a chancre had been present.

Dr. Hammond's opinions in this respect coincide with those of Hunter. The experiment of Ricord appeared to have finally decided the question that gonorrhœa was incapable of producing syphilis, and that they were totally different disorders. But the conclusions arrived at by Dr. Hammond are:

1st. That the virus of an infecting chancre, when deposited on a secreting mucous surface upon which there is no solution of continuity, may give rise to gonorrhœa unattended by chancre, but which is syphilitic in its character, and capable of producing constitutional desease.

2d. The matter of such a gonorrhœa is capable of causing an infecting chancre, either by natural or artificial inoculation, which chancre is followed by constitutional syphilis.

Similar propositions are made about soft sores.—*Med. and Surgical Reporter.*

The Stereoscope.—A curious effect may be produced by tinting the pictures of a stereograph with different colors. If, for example, one be colored blue and the other red, their blended image will appear purple; if blue and yellow be used, it will appear green, and so on. The colors are mixed *in the eye*, and the resultant color is precisely the same as if they had been mixed by a painter and applied to the picture outside of the eye. We have seen French stereographs of statuary which illustrate this principle. One of the pictures is colored green and the other yellow, and the mixture of the two in the eye produces the exact tint of bronze.

Quite an amusing story is told of the first introduction of the stereoscope to the *savants* of France. The Abbe Moigno took the instrument to Arago, and tried to interest him in it; but Arago unluckily had a defect of vision which made him see double, so that on looking into the stereoscope he saw only a medley of four pictures. The Abbe then went to Savart, but he was quite as incapable of appreciating the thing, for he had but one eye. Becquerel was next visited, but he was nearly blind, and consequently cared little for the new optical toy. The Abbe, not discouraged, called next upon Pouillet, of the Conservatoire des Art et Metiers. He was a good deal interested in the description of the apparatus, but unfortunaly he squinted, and therefore could see nothing in it but a blurred mixture of images. Lastly Biot was tried, but Biot was an earnest advocate of the corpuscular theory of light, and until he could be assured that the new contrivance did not contradict that theory, he *would* not see anything in it. Under these circumstances, the wonder is that the stereoscope ever got fairly into France; but if you have any doubts on that point, a short walk under the arcades of the Rue de Rivoli, in Paris, will soon settle them. We question whether you will see anywhere else on earth more stereoscopes or stereographs than are displayed in the windows of the picture-shops of that noted thoroughfare.—*Journal of Chemistry.*

MEDICAL NEWS.

'Nulla dies sine linea."

The Ohio Medical Society has arranged to have its meeting at Cincinnati on the same day appointed for the meeting of the Kentucky Medical Society at Covington, Ky. As the meeting will take place simultaneously on the opposite banks of the Ohio river, every arrangement will be made by the respective Committees of Arrangement to secure an interchange of official and personal courtesies. These meetings will form an era in the current medical history of the two States, and it is hoped that not only will the attendance be large, but that from both States all will come with heads, hands and hearts prepared for the mental, social and physical feasts in store for them. The wire suspension bridge connects at this point the great states of Ohio and Kentucky. Shall not a connection far more valuable, far truer and better than this, be established for all time by the physicians of both States? These Societies meet April 4th, 1871.

Many applications have been made for complete volumes of this Journal from the date of its first publication, January, 1866. A physician in misfortune offers to sell his complete set. It is the only one to be obtained, and will be sold on reasonable terms. Apply to the editor.

The vacancy in the Bellevue Hospital College Faculty, caused by the death of the lamented, distinguished and brilliant Geo. T. Elliot, has been filled by the election of Dr. W. T. Lusk, Professor of Physiology in the Long Island Medical College. He has just completed a course of lectures on Physiology at the Medical Department of Harvard University, Boston, and is one of the most promising and talented young physicians in New York.

The Faculty of the Medical College of Virginia passed very appropriate and eloquent resolutions in connection with the death of their late distinguished colleague, Dr. Beverly R. Wellford. The resolutions have been received for publication, but the memorial page in the last Journal renders this unnecessary.

The medical public will be pleased to learn that the distinguished lecturer and accomplished teacher, Prof. S. H. Dickson, of Philadelphia, has recovered from his recent severe illness.

The Medical Board of the New York Nursery and Child's Hospital and Infants' Home, from which Dr. A. Jacobi was expelled for reasons hitherto mentioned, has not resigned. This Board, consisting of Drs. J. J. Hull, T. B. Reynolds, R. F. Weir, E. Delafield, H. D. Bulkley, and T. M. Markoe, has recently been enlarged by the election of Drs. W. T. Lusk, McLane, and T. G. Thomas, who have accepted positions on the medical staff.

The Georgia Medical Companion, a new journal published at Atlanta, and edited by Drs. T. S. Powell and W. T. Goldsmith, has been received. It is well prepared, and the editors promise that it shall even be improved. May they be able to do this and to sustain themselves in the field which they have entered. It has proved to be a fatal field for Georgia journals, for though strong and meritorious, three of them have in four years therein perished. That it may not be a Potter's field (to bury strangers in) for this new laborer, is the hearty wish of the writer. The Companion has with pleasure been placed on the exchange list.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

Transactions of the Louisville Obstetrical, the Mobile and Tuskaloosa Medical Societies.—The transactions of these societies, as published in this number, will be read with interest and profit. As the papers from the Obstetrical Society refer entirely to questions of clinical medicine, no reference will be made here to them, further than to assure the reader that he will be fully remunerated for their study. In the papers from the Tuskaloosa and Mobile Societies the position is assumed that the rate of fees is not a factor in the problem of efficient medical teaching. There is no space here for argument, but this question will be asked: Should a vacancy occur in one of the chief medical schools of New York or Philadelphia, and it were announced that the trustees had so reduced the tuition fees in price that there could be no revenue for the teachers, how many of the distinguished medical men throughout this country who could shed lustre upon any institution would apply for this vacancy? Who that had acquired a high and lucrative position at home could be tempted to accept such a position, even were it offered to him? The vacancy would be filled by local practitioners; the entire Faculty would be, must in time be made up of such men, and the school, instead of resting upon an eclectic and catholic basis as to merit, would become a mere theatre for the display of local aspirants to medical fame. Declare a chair in one of these colleges, however, vacant, and let it be understood that the fees of the institution were such as to afford a full reward for the labors of the incumbent, and who does not know that the Trustees would no longer be compelled to make their selection from a local and circumscribed field, but that this could and would be made from the whole country? Would they not

justly be enabled to exclaim "No pent up Utica contracts our powers, for the whole boundless continent is ours?" Experience proves this. What gave celebrity to the Jefferson School at Philadelphia? The local talent of that city? Who does not know otherwise. Its great teachers were drawn from abroad, and every candid, logical mind must admit that this alone gave this school a name. Who among those who moved to Philadelphia to build up that school would, could have done so had the treasury of the institution been bankrupted by free teaching or by low fees? No one is absurd enough to reason to the effect that a course of lectures will be less valuable because those who deliver them are not paid for their labor (though non-payment must certainly impair the usefulness of a teacher, because he is driven to other labor for support), but the important, the significant question is, who will deliver lectures under such circumstances? What are the characters, the antecedents, the ability of those who would be willing to do so, and what is the value of the lectures that would thus be delivered? The history of medical colleges in this country furnishes the reply.

These societies at Mobile and Tuskaloosa are under the impression that medical education in Europe is obtained at a nominal rate. If any one will seek to obtain a medical diploma in Europe he will learn the contrary very speedily and expensively. As this delusion seems to have taken possession of the minds of so many, and as it is a delusion evidently tending to mislead and betray every one into untenable and mischievous assertions, it is proper to remove it; to destroy it at once and forever. It costs any one to take the full medical degree (the degree corresponding to that of Doctor of Medicine in America) in Paris, nearly $400 in gold. To take the full degree in Vienna costs not less than eleven hundred guilders, or a little over $500. In Berlin the full degree is obtained at a cost of at least three hundred and fifty thalers, or a little over $250. All know how very expensive the degree of M. D. is in London, Edinburgh, and Dublin. Is it not time, then, that such mischievously erroneous statements as are made by the Mobile and Tuskaloosa Medical Societies, and

by such a large number of influential physicians, should cease?

That graduates can attend European schools at nominal rates is true, but can they not do the same in America? To obtain the degree of M. D. in any first-class school in Europe or America costs the recipient dearly; not less in fees alone than $275. The sooner this fact is known, the sooner will there be sound and tenable views held and advocated in this connection.

The proposition made by the Tuskaloosa Society that the Alabama Medical College should be owned by the State, and the professors paid by the State, while the teaching should be gratuitous, is open to this objection, that it is impracticable. No State will do more than pay such salaries, while making such charges as will remunerate the State for the risk and outlay. A Legislature would smile at any other proposition. If gentlemen are to be comfortably supported by the State for teaching (what are commonly termed) allopathic doctrines, why should not the representatives of other doctrines, the homœopathic, the hydropathic, etc., be dry-nursed in the lap of State? Legislators are compelled by their constituents to take this view. There is, however, this historical objection to all such schemes; teachers thus having removed from them almost all stimulus for energy, enterprise, and industry, become, in the main, slothful; routinists; anodynes to their listeners; prosy and dull. All effort at progress and progressiveness ceases, and as teachers their efficiency becomes, if not destroyed, most seriously impaired. When those thus placed in endowed colleges do not manifest such results, it is because they are so personally as well as intellectually superior that they subordinate and overcome the causes which entail such disastrous results. There are many such noble men, but it is not safe to expect that they can always be procured. The combination of intellectual and professional superiority, with personal energy, industry, and general excellence, is rare indeed. Therefore endowed medical schools, with or without fees, are not desirable; they are not, as a rule, safe and efficient. The highest testimony (European and American) can be adduced in support of such a statement.

The best incentive to vigor and efficiency in a school is the stimulus of personal interest, personal pride and rivalry. Subsidize a medical college, and there will be the same result that history furnishes in connection with all subsidies; loss of energy, industry, vigor, and efficiency. All parasites, whether botanical, collegiate, or entomological in character, should be subjected to vigorous and destructive treatment. Above all things, let no one be encouraged who proposes to establish nurseries for their future creation and development.

One of the most remarkable statements ever found in the medical literature germain to the question of colleges and collegiate education is that which is announced by the committee of the Mobile Medical Society. It is the statement that the management of medical institutions is a "question over which the medical profession have no jurisdiction." It is only necessary to state this proposition for every one to realize its danger, its objectionable character, its total untenability. The position is assumed by those making it that a college owes no allegiance to the profession directly, and none to the State of which physicians are members. A college may be so conducted as to render it an engine of mischief and danger to the public, a reproach and an injury to physicians; the example of its Faculty may cast a stigma and a stain upon all physicians, but these are, or should be, powerless because "it is a question over which they have no jurisdiction." This is a position which the most dogmatic, ignorant, and self-asserting private citizen never takes even in regard to his own household and its management. So long as this household is by fair management in fair repute, the public justly takes no cognizance of it, but should this household become a nuisance or source of annoyance and turmoil, it is justly regarded a sore upon the social body, which can only be properly dealt with by the caustic application of the law. If the State and her citizens require safe management of all trusts, (banks, insurance companies, guardianships, etc.,) shall less be exacted of medical colleges; shall the State care more for property than for lives and the safety of the people?

Who can support such a monstrous position? Those who think thus are representatives of the most delusive and dangerous errors. Medical colleges, like all corporations to which the State has bequeathed important trusts, should never be allowed to claim that they are not severely responsible for the trust confided to them. Physicians, above all members of society, are soonest cognizant of any abuses of this trust; and as these abuses reflect upon their fame, their calling and character, they should make it their duty, as it is their manifest interest, to study the management of such trusts, and to have all errors and dangers connected with them conspicuously exposed; summarily corrected.

The very best men in the profession are too prone to assume that this is not their business; too prone to evade the responsibility and ill will and criticism entailed upon them by manly speech and manly action in this connection. Are they not laborers in a great field, the gates of which are entrusted to the Faculties of medical colleges? Are they willing and content that the keepers of these gates shall be irresponsible; that they shall admit those who are not worthy of admission into this domain, to destroy its character, its fruitfulness, and its value? If these keepers of the gates are paid so much for every one admitted, does not the commonest prudence require that those to whom so great a trust is confided should be closely observed; that for any folly or inefficiency on their part, entailing injury in purse or person upon the owners of this field, that they should be held to a just and strict account? It is impossible to interest the idle, the indolent, the dissolute, the worthless, in the profession in regard to this subject; but the conviction will never be abandoned, that it is the great body of the true and noble practitioners of this country who can and will grasp this vital problem and secure for all interested a safe, a just, and equitable solution of it.

Of course there is nothing herein stated which is designed to reflect upon the members of any College Faculty. The subject is one of universal interest, and it has been discussed irrespect-

ively of the claims, interests, and policy of any special institution.

NOTE.—It is as wonderful as it is acceptable to see the immediate response that has been made by societies to the invitation extended to them in the January Journal. This invitation was to furnish for publication such portions of their proceedings as would be of interest to the profession at large.

Local details and matters of business routine must be omitted. With this proviso all Society Transactions of value are respectfully requested for publication.

Shall Medical Societies Enforce their Laws—Shall they Govern or be Defied? The College of Physicians and Surgeons and Dr. A. B. Cook. Profitable reading and wholesome lessons will be found in the following statements. The facts are of local importance; their application is universal:

The professional and secular public of this city have had their attention prominently directed, through tho newspapers, to the recent action which a large Medical Society here has instituted in regard to Dr. A. B. Cook. It appears from well authenticated facts, that at a period immediately subsequently to the meeting of the American Medical Association, in May last, the College of Physicians and Surgeous in this city, called through notices published in the daily papers a meeting of its members to take into consideration the expediency of adopting a recommendation made by the Association mentioned. This recommendation was to the effect, that physicians making examinations of those who propose to have their lives insured should charge companies making such insurance five dollars ($5) as a fee for the examination of such applicant for insurance. This recommendation was unanimously adopted, and the fee for such examinations was definitely determined

should be five dollars. The insurance companies of the city made every effort possible to defeat the success of this legislation. Their efforts, however, were very properly, in the main, unsuccessful. It appears that Dr. Cook continued to make examinations for the original fee—viz: $3. When this fact was brought to the notice of the Medical Society charges were preferred against Dr. Cook for a violation of the laws of the Society of which he was a member. When summoned to appear before the committee, duly appointed to investigate the matter, he declined to appear, because the notice sent to him was not officially signed. This irregularlty being duly corrected, he was again notified to meet this committee acting under the laws and instructions of his Society. Dr. Cook declined to appear in person or reply in any manner to the charges made, assuming that he was not a member of the Society, because he had for sometime failed to attend its meetings or make any payments during the period of his absence. The Society, after duly considering the whole matter, and after generously giving Dr. Cook time for considering his action, unanimously passed a resolution of expulsion, and desired that the facts of such expulsion should be published in the newspapers and be made known to other societies: the State Medical Society and the American Medical Association. Such publication was made and such notices, as were ordered, duly given to the societies mentioned. Such are the facts, given with care and unquestionable justice. Dr. Cook has recently, in the newspapers, appealed to the general public, and invoked them to sustain his action; furnishing for their information reasons which, in his judgment, justify his own course and make unjust the course of his brethren. In such an emergency the medical press would be shamefully derelict, justly chargeable with a contemptible evasion of responsibility if it failed to duly notice a matter, the discussion of which is so essentially germain to its admitted province. This is particularly true in any case even of local importance, but when the principles involved are applicable to all societies, the matter ceases to be of local interest, and manifestly concerns every physi-

cian; indeed, every community in which similar relations exist. The medical press, under such circumstances, cannot avoid or evade the issue, unless those responsible for this press assume, as is assumed by a few medical editors, that it is convenient and profitable to be passive if action can entail responsibility or result in pecuniary loss. These are the editors who would fain degrade a medical journal into the position of a mere receptacle for doses and directions. Who would rob the press of all spirit and independence and censorship? Who would typify the noble genius of medicine and the comprehensive mission of the physician by an image at once ludicrous, degrading and repulsive, viz: The image of a brainless monster crowned with the mortar of the apothecary and wielding his pestle as the appropriate baton of rank and authority. To those who think and act thus it is very convenient and very desirable to be silent, but to those who think differently, it is improper to evade action, however unwelcome such action may be. To the writer, it is one of the most painful acts of his life to make the following comments. Dr. Cook has always been to him a friend, kind, considerate and true, but such welcome private relations cannot justify the evasion of a duty which devolves upon every one responsible, even in the humblest manner, for the discharge of those obligations which the medical press owes to the character of medicine, the welfare and good report of its representatives.

Dr. Cook's defence, in part, is, that it is inconsistent to punish him for the offence charged, when those inflicting such punishment have on other occasions infringed the laws of the Society with impunity. This is admitting a membership on his part which is elsewhere denied, and granting what those rebuked by him do not admit, official inconsistency, no one can claim immunity from the verdict of a legal jury, beeause these jurors may have been, at some period of their lives, violators, in other respects, of the laws which they are called upon to sustain. However wrong, in many respects, those voting for Dr. Cook's expulsion may have been (if they have been), their wrong unpunished does not make Dr. Cook's wrong less justly punishable.

Dr. Cook claims that he did not obey the summons sent to him because it was not officially signed, implying that had this informality not existed, he would, as a member of this Society, have recognized its authority; yet when this informality was remedied he refused to appear, because he was not, as he alleges, a member of the Society. Why, if this plea was to be made, should the first have been urged? Dr. Cook claims that he had withdrawn from the Society, because he had not attended its meetings for sixteen months; yet he presided at a meeting of this Society many months subsequent to the period from which he dates his withdrawal. Again he alleges that the non-payment of dues vitiated his membership, but there were no payments required of members during this period. Even had he been absent for the period claimed, prolonged absence does not destroy or even impair membership. Dr. Cook declares that this fee of $5 was only recommended by the American Medical Association, and as any recommendations of this body haye never received practical recognition, it was unjust and inconsistent to punish him for not observing a law based upon this recommendation. The reply is simple; the recommendation was only the reason for the establishment of this law; it was not itself recognized as the law. It was the action of the Society of which Dr. Cook was certainly at the time a member which gave existence to this law. The Society could have enacted this same law independently of all suggestions. The enactment of the law was indisputable, and such enactment was conspicuously published. No one doubts the jurisdiction of the Society in the enactment of this law. No one doubts its jurisdiction over its members where any of the laws are violated. Dr. Cook's Society makes a law; Dr. Cook violates this law. Can any one doubt the right of a Society to inflict the punishment prescribed by the constitution which Dr. Cook voluntarily promised to obey.

So much for what is undeniably true, while assuming that Dr. Cook was a member of the Society which expelled him. Admitting, however, that he was not a member, an admission

which is not just or tenable, he would be no less culpable in disregarding the fees established by the physicians of this city. The code of medical ethics provides that fees thus established shall be observed by all physicians in good standing. Some might allege that he repudiates the code of ethics; but Dr. Cook cannot do this. He was voluntarily a member of three Societies in this State which accept this code as a part of their fundamental laws. He is now a member of two Societies, whose laws are constituted in part by this code of ethics. Admitting that he no longer owes allegiance to the laws of the Society which he claims injured and expelled him, he is certainly a member of two other Societies, and is voluntarily amenable to their laws. These laws make it incumbent upon him to faithfully observe the schedule of fees established by a meeting of the physicians in his city, after due notice of this meeting had been publicly given. The termination of his membership at the College of Physicians and Surgeons therefore does not in any manner or degree absolve him from the fullest allegiance to the fee-bill duly and properly established by the physicians of this city. It may be pardoned, when the uninformed, the carpers, the jesters, the harlequins, professional and secular, affect to deride the code of ethics, but all physicians of good repute acknowledge a proper and just allegiance to it; certainly to that portion of it which empowers the physicians of a locality to determine their scale of fees. While physicians may differ somewhat in regard to the interpretation and justice of some clauses in this code, there is a full accord in regard to the clause which provides for the establishment of a fee schedule. Dr. Cook's opinions in this respect have been fully in accordance with those of the most reputable practitioners of this city, and his truest friends cannot but believe and hope that he will not persist in a course which must be fatal to his personal and professional welfare, and which must tend to stain the public record of a profession of whose honor and integrity he has always been a staunch and consistent supporter. As to his being unjustly or ungenerously treated, such a claim has been

shown to be wholly untenable. Such a body of physicians could not do him a wrong, even were there a motive for so doing; and surely every one must see that their only motive of action has been a desire to preserve unsullied the record of one of their associates and the record of the Society of which he and they are members.

Dr. Cook coming before the secular public through the columns of a secular paper, claims that his only object is that of self-defence; yet he abandons this object, and makes an unjust, untenable, and unworthy attack upon another Medical Society which was organized in recognition of the wishes of nine-tenths of the physicians of this city; organized for the purpose of securing the best interests of the profession; for promoting its honor and usefulness, and securing by the advocation of legislative enactments certain laws which are essential to the interests of medical science; laws legalizing dissection, insuring registration of births and deaths, etc., etc. Surely if anything could cause his friends more regret for the course which he has pursued in disregarding fees which his brethren have properly prescribed, it is his unreasonable and unjustifiable attack upon a Society which represents the strength, the talent and respectability of the medical profession of this city. Nothing more than this could increase the just feeling of reprehension which his injudicious and regretted course has almost universally and properly induced.

Unless medical societies are to become a contemptible farce, they must in all such cases manifest firmness and decision; they must uphold their laws. Manifest forbearance as long as forbearance is possible, but when forbearance ceases to be a virtue, Societies must be as ready to punish as they had been to protect. Unless the medical press promptly sustains such action when just, and denounces it when tyranical or unfair, its mission is degraded to the contemptible office of compilation, and to the pitiable condition of dependence and irresponsibility.

EDITORIAL BREVITIES.

This is the first number of the Journal printed on new type.

In the January number of the Journal the article on the Siamese Twins was not translated by Dr. S. Brandeis, the accomplished physician of this city, but by his son, R. Brandeis, now a medical student in New York: a young man of unusual proficiency and of great promise.

The name of Dr. S. H. Hornor (one of the publishing committee of the Louisville Obstetrical Society,) was last month erroneously printed Homer. The name of the retiring President of the Society mentioned whose address was published last month is W. H. Newman; the publishing committee omitted the name.

As a number of the associate editors, from various causes, (death, removals voluntary and involuntary, etc.,) are no longer connected with this Journal, the vacancies existing have been filled during the past month. Several gentlemen of distinction have their names appearing in that relation for the first time in this number of the Journal. They are too well known to require description. Drs. J. Marion Sims, of New York; W. A. B. Norcom, of North Carolina; T. T. Robertson, South Carolina; W. O. Baldwin, J. S. Weatherly and J. W. Williams, of Alabama; Samuel Logan, of Louisiana, and W. H. Doughty, of Georgia.

Dr. Jackson's translation of Jaccoud's next lecture arrived too late for publication. These admirable lectures will be continued.

The reviews of several works, pamphlets, etc., have, for want of space, been omitted; they will appear next month.

It will be observed that there is no portrait in this number. After a trial of two years the engravings on stone are found to be incomplete and unsatisfactory. They fail to give the clearness of outline and delicacy of shading so manifest in steel engravings. As bad work will not be issued, and as engravings on steel cost not less than five times as much as the engraving on stone, portraits will no longer be published. As soon as the increasing subscription list warrants the outlay, fine steel engravings will be issued. These will be costly, but very valuable. The subscribers to the Journal shall have them at the earliest day possible. Each subscriber has it in his power to accelerate the period of issue by increasing the subscription list. Will not each supporter of the Journal do this?

THE RICHMOND AND LOUISVILLE

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—CASE OF COMA FOLLOWING THE HYPODERMIC INJECTION OF MORPHIA IN A MODERATE DOSE, AND EXHIBITING CERTAIN PECULIAR CHARACTERS WHICH SERVED TO OBSCURE THE DIAGNOSIS. Reported by Prof. J. L. CABELL, M. D., University of Virginia.

On the 9th of September, 1869, Mr. J. F., a gentleman of advanced age, called at my office, at the Hot Springs of Virginia, and requested me to examine a specimen of his urine, which he said had become unusually turbid. He added that concurrently with this change the symptoms of a chronic malady (irritation at the neck of the bladder) from which he had suffered more or less for many years, had become more urgent and distressing. This effect he ascribed to a cold he had taken on the preceding day. He stated, further, that his physicians had often made examinations, and had assured him that the prostate gland was not affected. The specimen of urine filtered was found to be feebly acid, of low specific gravity (1010), and distinctly though slightly albuminous. Microscopic examination of the spontaneous sediment revealed the presence of pus corpuscles in considerable quantity, but no renal casts. There was no dropsy,

no nausea, nor any unusual debility. The amount of pus was quite sufficient to account for the inconsiderable quantity of albumen detected by boiling the filtered urine and adding nitric acid.

The patient was directed to take a warm hip-bath, which, he stated, had often given him relief in similar attacks, to remain in bed, and if not adequately relieved, to take 30 drops of elixir of opium at night. To provide against the contingency of the failure of these measures to procure rest, I made a conditional prescription of a suppository of extract of hyoscyamus and belladonna. Having on hand suppositories of hyoscyamus prepared by skillful hands in New York, I scooped out a small chamber in the base of one of them and inserted a grain of extract of belladonna. After midnight I was sent for by the patient, whom I found in a state of extreme restlessness and suffering. Micturition took place every few minutes, and was attended and followed by a great aggravation of his distress. He stated that when straining to pass water, shortly after the introduction of the suppository, he had discharged some solid matter from the rectum. On examining the vessel the suppository, altogether distorted in shape, but still of a semi-solid consistence, was easily identified. Apparently, however, the extract of belladona, which, as just stated, had been loosely packed in a shallow excavation, in the base of the cone-shaped suppository, had been detached from the rest of the mass, and had been retained in the bowels, for Mr. F. complained of extreme dryness of the throat which had supervened very suddenly. I divided a half-grain powder of sulphate of morphia into two equal parts, and proceeded to administer one of them in solution by hypodermic injection. A portion, and as I believed the larger portion, of this dose was accidentally lost. I confidently expected therefore to be under the necessity of repeating the operation. This, however, was not done until after the lapse of half an hour, without any manifestation of the effects of the first imperfect dose. By this time a servant had procured hot water in accordance with the directions of the patient, for whom the

warm hip-bath was a favorite and usually an efficient palliative remedy. He experienced marked but not complete relief from the combined influence of the bath and the opiate. The pain still recurred in paroxysms, but with diminished frequency and intensity. At length, more than an hour after the administration of the second dose, he was quieted so far as to consent to lie down; the intervals between the still occasionally recurring paroxysms were much longer, and the paroxysms bearable. The patient stating his confident expectation of being able to enjoy sleep, courteously relieved me from further attendance. Accordingly I left him, but directed the hotel-servant to remain in the room the remnant of the night, it being then near 3 o'clock A. M. Between 7 and 8 o'clock he came to inform me that Mr. F. had fallen asleep almost immediately after my departure; that he was sleeping quietly when he (the servant) left the room early in the morning, and that when he went back to get his orders for breakfast he could not awake him.

Proceeding in haste to the room, I found him in a state of profound coma without noisy stertor. While I was making my first observations there were exhibited slight convulsive movements, limited to one side of the face and the corresponding arm. *The pupils were slightly dilated*, skin warm, pulse 96–98, and of good volume, the respiration easy, 16–18, (subsequently it fell to 12.) My first impression was that the patient's condition was the result of an extraordinary susceptibility to the toxic effects of opium, an opinion which was subsequently, for a time, discarded by myself, but was maintained without doubt or hesitation by two experienced medical gentlemen, Dr. M. H. Houston, who at a late hour of the morning saw the case in consultation and watched with me for several consecutive hours until signs of returning consciousness were manifested, and Dr. O. A. Crenshaw, Mr. F.'s family physician, who did not see him until the following day, but who was cognizant of his *intolerance of opiates*. If this was indeed the true explanation of Mr. F.'s condition, there were other remarkable peculiarties in the case besides the extraordinary susceptibility to the poisonous effects

of opium during the existence of severe pain, which usually creates a tolerance of much larger doses than the aggregate amount taken in this case. Thus I may cite the non-contraction, and even a marked dilatation of the pupil, persistent heat of the surface, quickness and fullness of the pulse, and the trifling diminution of the frequency of the respiration. Such phenomena I have never witnessed in any case of opium poisoning where the coma was decided. May they be explained consistently with the hypothesis of opium poisoning by attributing them to the action of the belladonna antagonizing the opiate *quoad* these particular effects? This is conceivable. Apoplexy was held to be excluded by the absence of the low guttural stertor characteristic of that condition, and yet more decidedly, as the day wore on, by the protracted duration of the symptoms without further change for better or worse. Suppression of urine was also considered, and as there was nothing in the character of the rational symptoms to forbid this supposition I proceeded to test its truth by exploring the bladder. The test did not prove conclusive either way. This organ had been emptied in my presence as late as 2 o'clock in the morning, or perhaps a little later. When the catheter was introduced, at or about 9 o'clock, the quantity of urine was found to be a little less than two ounces. This was not examined chemically. It has been stated that the urine passed on the previous day was of low specific gravity, notwithstanding the presence of a notable amount of pus. As, however, the whole amount passed in a day had not been collected, and no quantitative estimate of the urea excreted in any given time was made, it cannot be asserted with positiveness that there was an absolute deficiency of this constituent. Yet this seems rather probable than otherwise. It was, I thought at the time, not unlikely that I had to deal with a case of partial suppression of the urinary excretion, in which the tendency to coma had been augmented by the concurrent effect of the opiate, which might otherwise have been harmless or even beneficial. It was, indeed, an obvious objection to this view that the coma

supervened far more suddenly than is usual in cases of uræmic poisoning, but this rule is not absolute. Thus Da Costa, (Medical Diagnosis, 2d Edtion, 1866,) after stating the rule, adds in a foot-note "that there may, however, be exceptions to this rule, as in a curious case reported by Moore, in the London Medical Gazette, 1845, in which a person became comatose after taking laudanum, yet his death was found to have been caused by contracted kidneys." Happily the parallel was not carried out in Mr. F.'s case, and this circumstance may be considered as sufficient to exclude the apparent analogy. The subsequent and prompt recovery of my patient may be urged as an almost convincing proof that there could not have existed any uræmic poisoning. But there is high authority for doubting the conclusiveness of such reasoning. Dr. Austin Flint, Sr., in a paper "On the Prognosis of Bright's Disease," published in the New York Medical Journal for July, 1869, states that he could cite abundant illustrations from his own clinical experience of the fact that uræmic convulsions and coma *often occur suddenly, and may be removed by therapeutical interference*, and adds that even when they depend upon a well-marked renal disease, the removal of the prominent symptoms is sometimes followed by complete recovery of the renal affection.

Under the influence of such views I administered a saline hydragogue cathartic by the rectum, applied the ascetic cantharidal vesicant to the calves of both legs, and had the patient wrapped in warm blankets, a good fire being maintained in the room. The enema was retained for five or six hours, Dr. Houston having meanwhile arrived. The progress of the case was watched by us with great anxiety, but with more hopefulness by him than by myself. When the afternoon was far advanced there were manifested some indications of sensibility in very slight movements of the legs concurrently with the first appearance of redness and vesication on the surface to which the cantharidal solution had been applied. A little later the patient's face and body became covered with a profuse warm perspiration, and this was soon followed by an involuntary watery stool, and

not long thereafter, towards nightfall, Mr. F. opened his eyes and uttered an indistinct but audible sound when called by name. During the ensuing night he had numerous liquid stools, recovered complete consciousness, and slept at intervals quietly and refreshingly. The vesical symptoms did not recur in any degree of severity. The patient remained in bed more than a week, and took bromide of potassium in 10-grain doses three or four times a day.

ART. II.—A SLIGHT CONTRIBUTION TO THE KNOWLEDGE OF THE PHYSIOLOGICAL ACTION OF THE HYDRATE OF CHLORAL, CHLOROFORM, AND MORPHIA, AS EXHIBITED IN SOME EXPERIMENTS UPON DOGS AND CATS. [Read before the Boyle County Medical Society November 22, 1870.] By JOHN D. JACKSON, M. D., of Danville, Ky.

May 3, 1870, Experiment 1—9:10 A. M.—A male cat, white and black-spotted, weight five pounds; temperature by thermometer in anus, 103 F. Injected hypodermically behind left fore-shoulder hydrate of chloral (Liebreich's manufacture) ℈j. dissolved in aq. fluv., m. xxx. 9:20, temperature 102. 9:45, injected additional gr. xv. hydrate chloral in aq., m. xxv.; great excitement immediately followed, struggling violently, tongue protruding, bowels evacuated, pupils dilated. Within a couple of minutes the excitement ceased. 10, temperature 100½; 10:10, temperature 99½; 10:20, temperature 97½; 10:30, temperature 96; 10:40, temperature 95; 10:50; temperature 94. 11:15 I removed one of the testes, loss of blood only amounting to two or three drops. Though perfectly relaxed during the operation, yet he showed that sensibility remained by growling, though he did not struggle in the least or lash his tail (as the feline race do when in pain or anger).

12, pupils contracted almost to a line, temperature 93. 12:30, pupils widely dilated, membrana nictitans off of ball; tempera-

ture 92. 1 P. M., pupils suddenly contracted, membrana nictitans on ball, temperature 91. 2:30, pupils still contracted, temperature 89; 3, temperature 88½; 4, temperature 87½; 5, temperature 86½; 6, temperature 86; 7, temperature 85; 7:30 died, temperature 83.

From 1 until 4 o'clock the intestines of the animal kept up a continuous vermicular motion, so that their "growling," as it is called, attracted especial attention to them. I frequently put my hand on the abdomen, examining them, and their twisting vermicular action was most markedly perceptible. During the time of the continued vermicular motion within (just after 1 o'clock) I removed the remaining testis without the animal moving or exhibiting the least sign of sensibility. The variations in the dilatation of the iris during the evening was a phenomenon both striking and curious, when we consider the profound stupor and general anæsthesia at the time existing.

Post mortem 6 A. M. on the morning following. Brain natural, lungs greatly congested, heart (right side) loaded, bladder filled with urine, bowels natural.

May 4, Experiment 2—2:15 P. M.—A large barrow (emasculated) cat, weight 6¼ lbs, meagre and of unhealthy aspect; temperature 103. Injected hypodermically hydrate chloral, (Liebreich's) gr. xxv. aq. m. xl., making two injections, one just above the fore leg, the other just above the hind leg. On finishing the injection he was immediately turned loose and allowed to roam about the room. 3, has been much excited, walking around the room, but is now unable to walk. 3:30, lies upon his side, tries to get up, but cannot, breathing irregular and agitated, growls in low tone; temperature 98. 4:30, pupils dilated, tongue out, tries to crawl, temperature 95½. 5:30, respiration 14; temperature 94. 6:30, respiration 20; temperature 91. 8, respiration 22; temperature 87. 9, respiration 22; temperature 88. 11, respiration 16; temperature 88.

May 5, 6 A. M., respiration 10; temperature 79. 7:30, respiration 8; temperature 79. Evidently on the verge of expiring. 7:40, injected hypodermically strychniæ sulph. in aq. m. x.

8, pupils widely dilated, respiration 11; temperature 79. Is still perfectly limber; can put his limbs in any position, but on being touched, or on fanning him with a current of air, kicks convulsively. 8:5, kicks convulsively without the stimulus of touch, or breath of air; breathes much deeper. 8:35, though the limbs are still perfectly flexible, he now has spasmodic kicking of the limbs every three to five seconds; the respiration is 14, and the pupils are dilated to their utmost. Injected chloroform hypodermically m. x. 9, respiration 17; pupils dilated; temperature 81, 9:30, respiration 18; pupils dilated; temperature 82½. 10, respiration 20; pupils dilated; temperature 83½. 10:40, on returning to my office found him dead.

Post mortem at 10 A. M.—Body not rigid; bronchi filled with a tenacious mucus, but lungs natural, not hepatised as in the cat of day before yesterday. Heart not engorged, containing a moderate quantity of fluid blood; intestines empty and healthy; liver healthy; gall bladder full of bile, and urinary bladder distended with urine.

May 15th, Experiment 3 and 4—9:20 A. M.—A yellow female cat, weight, 6 lbs, 15 oz., temperature 101½. Gray male cat, weight 4 lbs, 14 oz., temperature 103. They were each fed upon raw meat, and a half hour afterwards I injected 20 grains chloral in aq. m. xl. into the yellow, and ⅛ grain of morphia aq. m. xx. into the gray. A few minutes afterwards the gray vomited up its meat, and seemed greatly excited. 11 A. M., yellow manages to walk; temperature 99½. Gray still greatly excited; pupils dilated, temperature 107. 11:30, yellow sleeps; gray excited and walking. 2 P. M., yellow sleeps; temperature 95½; gray excited and walking; temperature 107½; 6 yellow sleeps; temperature 95. Gray excited and walking; by an accident got out of the room. 9, an ophthalmoscopic examination of the yellow cat's eyes showed the retinal vessels markedly contracted. Died about midnight, squalling previously.

Post mortem next day.—Viscera all healthy, bladder filled with urine; small clot in left side of the heart, stomach and duodenum filled with chyme and a mass of hair.

May 17, Experiment 5 and 6—11:30 A. M.—Yellow and black-spotted cat, female, weighing 4 lbs, 10 oz.; temperature 101½. Gray male the subject of the experiment of the 15th instant. Injected chloroform, m. xxv. into the yellow cat, and gr. xv. of chloral in aq. m. xxx. in two injections, into gray. 2 P. M., yellow, temperature 101; gray, temperature 99; 3 yellow, temperature 101; gray, temperature 97½; 5 yellow, temperature 102; gray, temperature 98½. 9:30 yellow, temperature 103, gray, temperature 96.

May 18, 8 A. M.—Yellow moves about apparently well; gray, temperature 97. 2 P. M., on returning to my office found the yellow cat dead; gray, temperature 94; 8, gray sleeps and involuntarily passes urine; temperature 97½; 10, gray, temperature 99.

May 20, gray runs about well; temperature 101½.

May 27, Experiment 7.—Female cat, weighing 5 lbs, 4 oz.; temperature 101. 11:15, injected chloroform, m. 30. 12 M., temperature 101. 11 P. M., seems perfectly well; temperature 102½. Injected chloroform ʒj., putting it in in two places; cried a good deal afterwards.

May 28, 6 A. M.—Temperature 102½; disinclined to move, though does so on being forced, still having the full use of its limbs; breathing regular. 8 A. M., can be no longer forced to walk, though moves its limbs, and seems to recognize one. The ophthalmoscope shows very marked retinal congestion; temperature 95. 11 P. M., quite relaxed, pupils normal; whines on moving. Unlike the cats relaxed to the same degree by chloral, she will draw up her legs on their being stretched out.

May 28, was found dead in the morning.

Post mortem showed the viscera all healthy; gall bladder and urinary bladder distended.

June 9, injected hypodermically with chloral, morphia, and chloroform, three female puppies of the same litter, aged nearly two months. 11 M., No. 1, weight 5 lbs, 6 oz.; temperature 101; 2, weight 5 lbs, 2 oz.; temperature 101; 3, weight 5 lbs, 3 oz.; temperature 101. No. 1, chloral gr. x. aq. m. xxv; 2, chlo-

roform m. xx; 3, morphia sulph, gr. ¼, aq. m. xx. 12 M., No. 1, temperature 101; 2, temperature 100½; 3, temperature 99. 1 P. M., No. 1, temperature 100½; 2, temperature 100½; 3, temperature 98. 4 P. M., No. 1, temperature 100½; 2, temperature 100½; 3, temperature 100.

June 10, all three seemed well. 5 P. M., No. 1, injected chloral grs., xx.; temperature 101; 2, chloroform, m. xxx.; temperature 101; 3, S. morph. gr. j.; temperature 101. 8 P. M., No. 1, temperature 101; 2, temperature 98; 3, 97½.

June 12, 11 A. M.—No 1., temperature 101; 2, temperature 102; 3, temperature 101. Injected No. 1 with chloral grs. xl.; No. 2, a half hour later, with chloroform ʒj., and No. 3 morph. sulph. grs. ij. 12:30 P. M., No. 1 sleeping profoundly; temperture 95.

Laid open the abdomen, and by a longitudinal incision nearly an inch in length, laid open the intestine, and sewed it up with five silken sutures after Lambert's method, and closed the abdominal wound by five silver wire sutures. During the time the animal did not give the least evidence of pain by motion or noise, save at one instant giving a faint whimper.

At this time No. 2 moved voluntarily, being able to stand up, temperature 102. No. 3, though stupid, could be aroused, temperature 97½.

4 P. M., No. 1, pupil dilated, sensibility returning, indeed hyperæsthesia exists, for she cries on the slightest pinching; temperature 102½. No. 2, temperature 102; No. 3, 97½

June 13, all three moving about apparently pretty well; No. 1 alone refused food, but subsequently entirely recovered.

The above recorded experiments are, it is true, very incomplete, and we offer them for no more than they are worth, wishing that some one possessing leisure and properly situated, would take them up and go on with them.

Their results certainly do not exactly harmonize with the theory of Liebreich and others, who believe the anæsthetic effects of the hydrate of chloral to be alone due to the elimination of pure chloroform into the blood. We observe from them that other

substances than chloral, the sulphate of morphia, for instance, have the power of markedly lowering the animal temperature. We observe furthermore the much greater susceptibility of cats than dogs to the effects of chloral; the quantity which proves simply soporific to a puppy being toxic to a cat of the same weight. The difference in effect upon the retinal vessels of chloral and chloroform, the one contracting and the other dilating them, as shown by the ophthalmoscope, is a matter of interest. We also observe that digestion continues while an animal is under the influence of chloral, and what is of importance, that the peristaltic action of the bowels continues, even though the animal be profoundly anæsthetised by it, showing, if we should reason analogically, that it is not as reliable a remedy in colic and certain other intestinal troubles as some writers reasoning *a priori* have been led to believe.

However, analogical reasoning, deducing conclusions as to the effects of an article of medicine or food upon man, from results observed to follow its administration upon the lower animals is never entirely trustworthy, always requiring the confirmation of clinical experience for its full acceptance.

ART. III.—SACCHARATED PEPSIN. By E. SCHEFFER, Apothecary. Read by Dr. J. M. HOLLOWAY before the College of Physicians and Surgeons, Louisville, Ky., January 1871.

Gentlemen,—The favorable notice which was bestowed on the liquid pepsin, as well as the decided success which it had in a great many cases, emboldens me to address you again.

As most of you are aware, the formula for making liquid pepsin, published last spring, was not quite successful, as the preparation resulting from it was apt to become mouldy, the more so the oftener it came in contact with the air. That the

air had a great deal to do with this mould was proved by placing fresh prepared, quite clear, liquid pepsin in several vials, which were well corked and sealed, with the exception of one, which was only tied up with paper. After several weeks this latter vial was almost entirely filled with a fucoid vegetation, while most of the others kept entirely clear, and only a few had a little mould on the cork. To obviate the formation of mould, I thought it expedient to increase the quantity of glycerine in the preparation to fifty per cent. without changing the proportions of mucous membrane or muriatic acid, and you certainly have noticed that in the last five or six months the liquid pepsin had not only a better appearance, but kept better also.

Those of my colleagues who made their own liquid pepsin I made acquainted with this change. Several physicians who talked to me about liquid pepsin expressed a wish to have the preparation free of acid, but considering the amount of hydrochloric acid in the preparation essential to its durability and efficacy, I did not like to make a change. Others suggested to me the preparation of a dry pepsin, so that they could administer it in the form of powders. Having been all the year engaged in the preparation of liquid pepsin, and always experimenting upon it, I succeeded at last in preparing it in a dry form, which I bring now to your notice.

This preparation, "Saccharated Pepsin," is a mixture of pepsin and sugar of milk, and contains besides a minute quantity of chloride of sodium, which addition I found accelerating the solution of coagulated albumen. In a great many cases the physicians found a teaspoonful of the liquid pepsin a sufficient dose, therefore I made the strength of the saccharated pepsin so that one grain corresponded to one teaspoonful of liquid pepsin, or that one grain was capable of dissolving 12 grains of coagulated albumen.

The pepsin, when freshly precipitated from its solution, is easily soluble in water, but when dried it dissolves very little in cold water, more in water of eighty degrees, but quickly when

a little acid (hydro-chloric or lactic) is added. When administered in form of powder there will be acid enough in the stomach to dissolve it and make it active; when prescribed in solution a little acid has to be added. For the preparation of liquid pepsin it suits well, and has the advantage that every druggist, who does not like to make it directly from the stomach, can readily make it. For that purpose I propose the following formula: ℞—Saccharated pepsin, 64 grains; water, 5 fluid ounces; muriatic acid, 1 fluid drachm. Shake in a bottle until the pepsin and milk-sugar are completely dissolved, then add three fluid ounces of glycerine and filter. A colorless liquid is formed, of which one fluid ounce dissolves 1½ drachms of coagulated albumen. The strength of the saccharated pepsin, ascertained by its solvent power on coagulated albumen, is, compared with other dry pepsins in use here, such that one part of it equals about 3½ parts of Boudault's, 8 to 9 parts of Grimault's, 12 parts of Hawley's, and at least 40 parts of Houghton's dry pepsin.

While 10 grains of saccharated pepsin in one fluid ounce of water acidulated with 10 drops of muriatic acid, and kept at a temperature of 100 to 105° F., dissolved 120 grains of coagulated albumen in from 3 to 4 hours, it required under identical conditions between 30 and 40 grains of Boudault's to dissolve the same amount; 60 grains of Grimault's dissolved but 84 grains, and 60 grains of Hawley's only 60 grains of coagulated albumen. With Houghton's pepsin most of the little cubes, into which the albumen was cut, had not even lost their sharp angles and corners. Boudault's pepsin, which I had used for experiments last winter, must have been adulterated or spoiled, as I recollect right well that it was a damp, sticky powder, of somewhat different color than the one I used this time; therefore its strength compared with the liquid pepsin was found so much less than in the present experiment.

To substantiate the assertion formerly made that wine of pepsin and all other preparations of pepsin containing alcohol were devoid of digestive power, I made the following experi-

ments: Two equal quantities of dry pepsin were dissolved in acidulated water, and to one of them after solution ½ of alcohol was added. The same amount of coagulated albumen was put into each bottle. By the time that the albumen in the vial without alcohol was entirely dissolved, the albumen in the other one was not acted upon, and the little cubes had retained their shape.

Dry pepsin, precipitated with alcohol from its solution, was dissolved in acidulated water, and coagulated albumen added to it; a solution of my dry pepsin was likewise made and the same quantity of albumen added. The pepsin made with alcohol did not seem to act on the albumen, which appeared to be exactly the same in shape and bulk as when it was put in, in a certain time by which my pepsin had dissolved the albumen entirely. It seemed to me to be of importance to find if pepsin made from calf rennet was identical with that made from the hog. I therefore prepared a liquid pepsin from rennet in exactly the same way and the same proportions as from the mucous membrane of the hog. When compared with liquid pepsin, as to its digestive strength, it was found that pork pepsin dissolved about ⅓ more of coagulated albumen than calf pepsin in the same time. With dry pepsin made from rennet I obtained the same result. By experimenting with meat the difference was still more in favor of the pork pepsin, as a certain quantity of beef was dissolved by this, while in the same time the bulk of the beef was not appreciably diminished by the calf pepsin, although it had loosened the fibres and softened the meat.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—ACUPRESSURE,* WITH SOME REFERENCE TO ITS APPLICATION IN THE CONTINUITY OF ARTERIES. By GEORGE A. PETERS, M. D., New York, Attending Surgeon New York Hospital.

Hæmorrhage, with its attendant dangers, was held in such dread by surgeons until a comparatively moderate date that they hesitated long before performing amputation or any important operation which, by the division of large arteries, should induce it. Waiting the time when the process of gangrene and sloughing had obliterated the vessels, they merely lopped off the dead tissue, and left the wound to Nature or to the rude dressings of the day. If others, bolder than their fellows, dared to cut before this time, their chief reliance for checking the flow of blood was upon glowing steel and boiling pitch.

When (three hundred years ago) Ambroise Pare, as he claimed under the inspiration of the Deity, employed and urged upon the attention of the profession the use of the ligature before but hinted at, as it were, he conferred a great boon upon suffering humanity, and robbed surgery of half its terrors to the surgeon. It remained for an American, in the nineteenth century, by the introduction of the inhalation of anæsthetic vapors, thereby obliterating all sensibility to pain, to repay the debt which our day owed to the past—to make formidable operations pleasant to the surgeon, painless to the patient, and more certain in their results.

From the time of Pare the ligature continued to grow in

* This paper was read before the Medical Society of the county of New York.

favor, and soon became the sole reliance in stopping the flow of blood after amputation and all major operations. The profession seemed to have settled down in the belief that notwithstanding its few obvious evils, there was, and probably would be, no better means devised. However, Sir James Y. Simpson—believing that, "as a practical science, surgery must ever march onward, it can acknoweldge no boundary to its onward progress and development, and knows no finality"—first described to the Royal Society of Edinburgh at their meeting on the 19th of December, 1859, "acupressure as a new hæmostatic process founded on the principle of the temporary metallic compression of arteries." The proposition was kindly received by the profession, and the method tried by surgeons in various parts of the world. Professor Simpson himself gave the matter no further consideration, as "the subject lay somewhat without the ordinary walks of his study and practice," until December, 1863, when he published in the London Medical Times one or two lectures on acupressure, which have since been enlarged, and have appeared in book form. From time to time cases in which acupressure has been used have been reported in the various medical journals, and remarks made thereon.

Next to Professor Simpson's book, the most complete and satisfactory *resume* is the joint work on acupressure by Drs. Pirrie and Keith, two surgeons of Aberdeen Scotland, who have recorded a large number of cases, instituted valuable improvements in the methods of its application, and given many hints in its practice.

The essay prepared by Dr. Joseph C. Hutchison, of Brooklyn, L. I., entitled "A Practical Treatise on Acupressure," and read before the Medical Society of the State of New York at their meeting in 1869, to which the "cash prize" was awarded, is by far the most complete and laborious record of acupressure made in this country. By the kindness of Dr. Hutchison I am permitted to avail myself of the results of his experiments on the lower animals and various other matters connected with the subject.

Before proceeding to discuss the various methods by which hæmorrhage from bleeding vessels is checked, it will be well to allude briefly to the anatomical construction of an arterial tube. The walls of arteries are divisible into three coats: The inner one, thin, transparent, and smooth, resembling somewhat a serous membrane. The middle coat, the thickest of the three, is divided into two layers—the outer of the two is yellow elastic tissue, the inner layer is composed of organic muscular fibre arranged circularly; these circular fibres are loosely bound together by connective tissue, and give way easily to a slight degree of force exerted in the circumference of the artery. The outer coat is white, dense, and very elastic, not readily yielding to force. Arteries are themselves supplied with arteries, veins, nerves, and absorbents, and are thus enabled to undergo any change to which other living tissues are subject, and can inflame and repair.

Let us now briefly consider the means which Nature employs for the suppression of hæmorrhage from divided arteries.

Dr. J. F. D. Jones, an English surgeon, instituted a series of experiments on the lower animals to determine the manner in which hæmorrhage was checked by Nature and by the ligature. The result of these experiments was first made public in a volume published in London in the year 1805, which established these facts, viz: When an artery is divided, we have, first, a spirt of blood; then quickly following this a retraction of the artery within its sheath, and a contraction of its extremity. As the connective tissue between the vessel and its sheath is very loose, it is readily stretched and torn, leaving the internal surface of the sheath uneven; the blood becomes entangled as it flows, and "thus the foundation is laid for the formation of a coagulum at the mouth of the artery, and which appears to be completed by the blood, as it passes through this canal of the sheath, gradually adhering and coagulating around its internal surface till it completely fills it up from the circumference to the centre." This forms the external coagulum, and it is the first complete obstacle to the continuation of bleeding.

The blood just within the mouth of the artery is now at rest, and if there be no collateral branch given off very near it, a slender conical coagulum is formed, attached only by the circumference of its base, near the cut extremity of the vessel. This is called by Dr. Jones the internal coagulum.

The artery, being itself highly organized, "inflames at its cut end, and by the usual processes of repair the effused fibrin between the internal and external coagula adheres to them, and is firmly united to the internal coat of the vessel." There is, also, a gradual contraction of the end of the artery, and an effusion of fibrin between the tunics of the artery and into the surrounding tissues, causing them to become thickened and intimately incorporated with each other.

As it is not within the scope of this paper to discuss all the surgical means used for the suppression of hæmorrhage, but rather to contrast the three methods by *ligature*, *acupressure*, and *torsion*, I shall but name the tourniquet, the roller and compress, the cautery, caustic, and styptics, and pass on to

THE OPERATION OF THE LIGATURE WHEN APPLIED TO ARTERIES.

When an artery is properly tied, the effect of the ligature is to press together the parietes of the vessel, and after they touch, if the ligature is further tightened, the internal and middle coats are cleanly and regularly cut through; while the external coat, from its peculiar structure, resists the action of the ligature, and becomes interposed between the upper and lower margins of the wound in the other coats of the artery, the two divided ones retracting, their wounded margins coming in close contact.

A coagulum of blood forms within the artery, if there be no collateral branch near the point of the ligature. Although the nearness of a collateral branch always prevents the formation of a coagulum, it does not always prevent the completion of the adhesive process.

This pressure by the ligature, sufficient to close the calibre of the vessel, does not interrupt the vital properties of the two

divided coats, and by inflammatory action their two edges adhere, and the canal is closed. Inflammation is likewise produced on the corresponding external surface of the artery, by which it becomes thickened. The surrounding soft parts also become inflamed, thickened and agglutinated.

In the mean time, the vitality of the outer coat being destroyed at its constricted portion, the ligature causes ulceration, which, after a time, detaches it and allows it to come away; after which the small sinus heals and the process is complete, the artery being obliterated and converted into a fibro-cellular cord to the collateral branches on both sides of the part which had been tied.

TORSION.

The fact that after extensive wounds, where arteries were drawn out and torn across by violence, there was no considerable hæmorrhage from these vessels, led surgeons to imitate this method after operations.

Torsion was probably first practiced by Galen. Several French surgeons, about the year 1829, after experimenting upon the inferior animals, tried it upon the larger vessels in the human subject after amputations and other operations of magnitude.

Baron Dupuytren tested the plan at Hotel Dieu, and arrived at the conclusion "that torsion may be safely applied to arteries of small calibre, but that it is imprudent to trust to it where they are of large size." After this verdict from an authority so high, the practice seems to have fallen much into disuse.

There are three methods of performing torsion:

First Method, is to seize the end of the bleeding vessel between the blades of a pair of forceps and draw it out a short distance; then by rotating the forceps the extremity of the artery is twisted several turns upon itself.

The objection to this method is, that by drawing out the vessel its vital attachment to surrounding tissues is destroyed, and inflammation and death of the part so treated results; which in-

flammatory process may involve the artery beyond, and serious trouble results.

Second Method.—Take hold of the end of the artery with a pair of forceps, draw it out gently for a short distance, then seizing it with a second pair near its point of emergence from the soft tissues, you fix it; after which, by rotating the first pair of forceps three or four times, the artery between the two pairs is twisted, and the bleeding ceases. Both of these methods tear, to a greater or less extent, the internal and middle coats of the vessel, thus producing adhesive inflammation and permanent closure, in much the same way as the ligature.

Third Method.—In practicing this method the point of the artery should alone be seized and strongly twisted until the portion included between the blades of the forceps comes away.

This method was used by Professor Syme, and is now used by other Edinburgh surgeons, who seem to be somewhat loath to yield allegiance to acupressure.

ACUPRESSURE.

For the practice of acupressure in its various methods the following appliances are required:

Pins, varying in length from three to six inches, with solid heads or heads of glass.

Needles, also of various lengths, threaded with fine annealed iron wire, and a loop of fine annealed iron wire about six inches long. Bayonet-pointed pins and needles are less likely to cut the tissues, and are more easily introduced; although in the deeper tissues, where the skin is not involved, the ordinary sewing-needle will answer very well. After the needle is threaded, the wire should be doubled and twisted upon itself through its entire length, for, if it be doubled only for the distance of an inch or so from the eye, in withdrawing it the short terminal point is apt to become entangled in the surrounding tissues, and give pain to the patient. Pure silver wire, or the purest pliant copper wire—gold electro-plated—may be used, although decidedly less easily manipulated than the iron. The

pins and needles may also be electro-plated, and should be sufficiently strong and well tempered not to bend in the using.

A reference to the accompanying wood-cuts will make clear the following description of the various methods of applying acupressure.

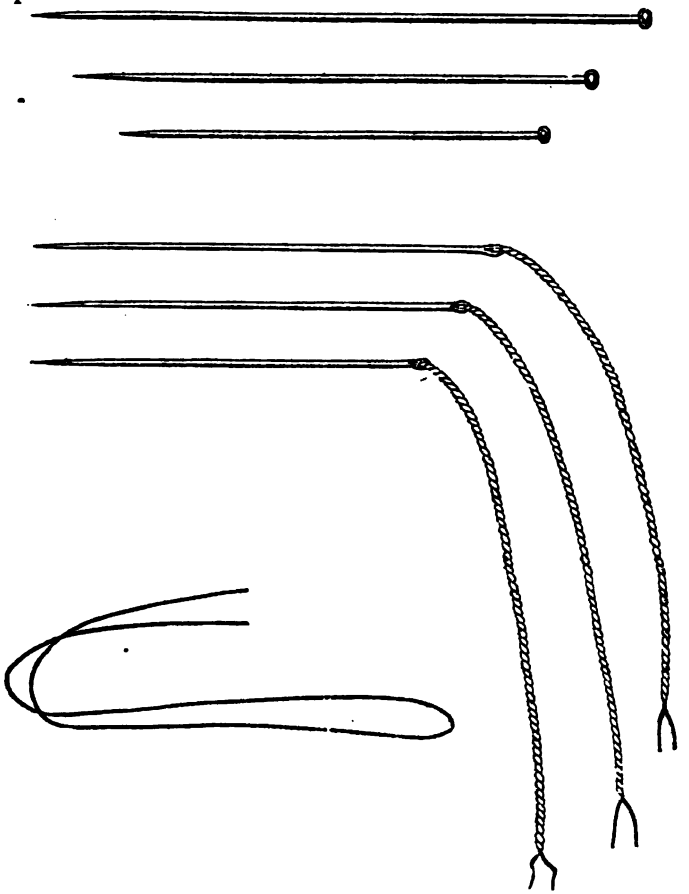

Fig. 1.—Acupressure pins, needles, threaded with iron wire, and loop of annealed iron wire*

First Method, as described by Professor Simpson, "consists in passing a needle through the flaps or sides of the wound, so

* The cuts in this paper are from Pirrie and Keith's work on Acupressure.

as to cross over and compress the mouth of the bleeding artery or its tube just in the same way as, in fastening a flower in the lapelle of our coat, we cross over and compress the stalk of it with the pin which fixes it, and with this view push the pin twice through the lapelle." If the pin crosses the artery just at its bleeding mouth, a small extent of its middle portion is exposed; but if desirable this may be avoided by concealing the pin entirely in the tissue and compressing the tube of the vessel a few lines back from its mouth. The head and point of the pin are exposed upon the cutaneous surface of the flap.

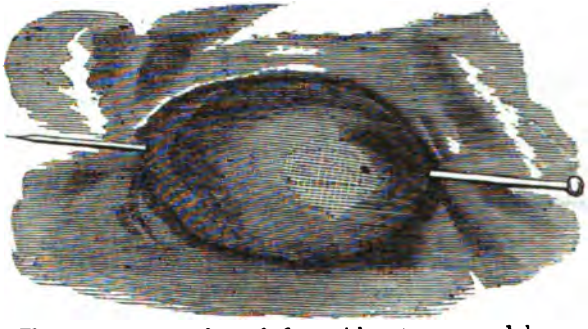

FIG. 2.---The cutaneous surface of flap, with artery secured by acupressure pin according to first method.

To perform this method, seize the flap between the fore-finger and thumb of the left hand, the thumb covering the open mouth of the vessel; in this way the artery can be felt pulsating between the finger and thumb. Holding the pin in the right

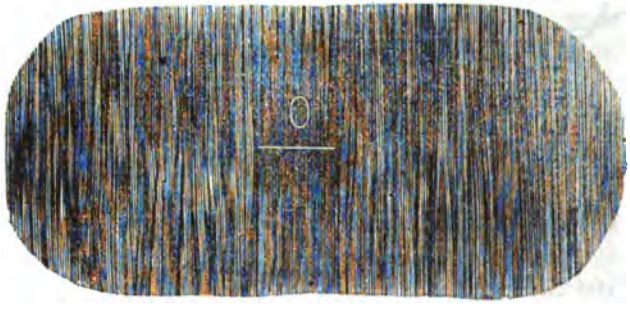

FIG. 3.---The wound surface of the same flap, showing the pin compressing the artery.

hand, thrust it from the cutaneous surface entirely through the thickness of the flap, causing its point to emerge a short distance from the side of the artery. Then by forcibly inclining the head of the pin away from the artery, it causes the point to press upon the vessel with sufficient firmness to close its calibre—now carry the point on into the tissues a short distance beyond, and thrust it out again through the cutaneous surface. Thus the artery is compressed between the middle portion of the needle and the soft parts of the flap. For this proceeding one of the longest pins will be needed if the flaps are of any considerable thickness.

Second Method.—For this method, select a needle of the proper size, armed with a fine annealed iron wire to facilitate its removal; thrust it into the fresh surface of the wound at a short distance from the bleeding vessel, pass it on and cause its point to emerge as near the vessel as possible without transfixing it; then on again over the vessel, completely compressing it; then dip the point once more into the fresh surface close to the vessel on the opposite side; continue to force it on, causing the point of the needle to emerge a second time upon the cut surface. This bridges over the artery and completely occludes it. The degree of pressure exerted is slight, but sufficient to stop the bleeding in the smaller vessels. There are other methods, shortly to be described, which are preferable. A pin may be used if the bleeding point to be secured lie sufficiently near to allow the head of the pin to be brought outside of the lips of the wound.

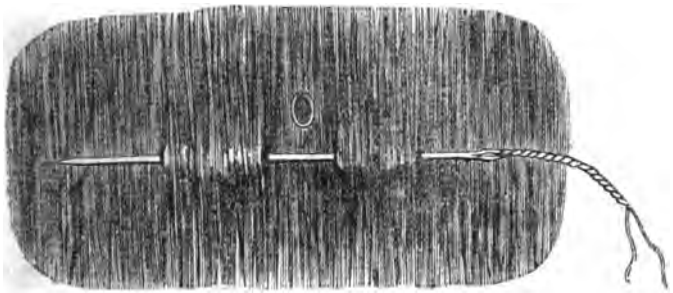

FIG. 4.—The needle threaded to admit of its being withdrawn. Second method.

Third Method.—A needle, threaded with a twisted annealed iron wire, is thrust into the soft parts on one side of the artery, carried on behind it, and then the point is made to emerge upon the opposite side of the vessel. Pass a loop of wire over the point of the needle—bring the wire back over the track of the artery and behind the eye-end; draw up the wire with sufficient force to close the vessel, and then fix it by a half twist around the shank of the needle.

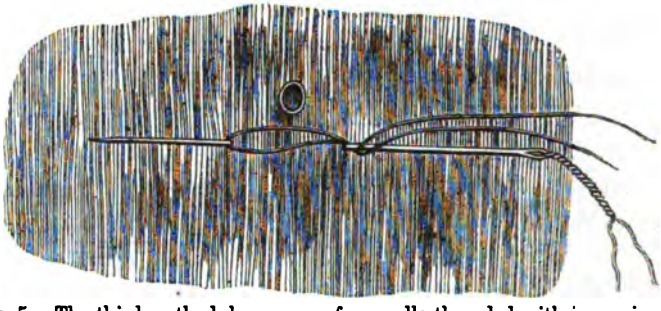

FIG. 5.—The third method, by means of a needle threaded with iron wire, and a loop of annealed iron wire.

Fourth Method.—This is merely a modification of the third; a pin being substituted for the threaded needle. When the vessel to be secured is so situated that the head of the pin can be left external to the lips of the wound without any undue straining of the parts, the fourth method can be performed more easily than the third, and both the wire and the pin can be re-

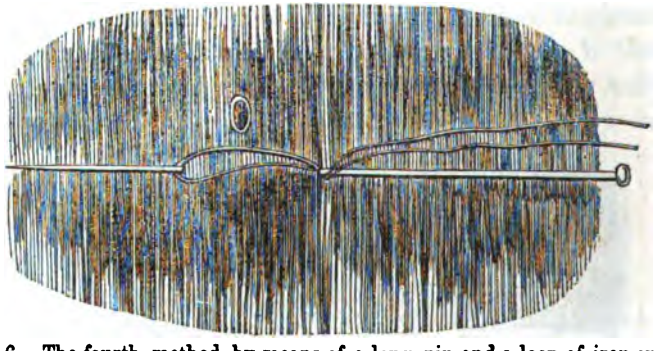

FIG. 6.—The fourth method, by means of a long pin and a loop of iron wire.

moved with greater facility than where the threaded needle is used.

By the *third* and *fourth methods* the tube of the artery is compressed between the pin below and the wire above, and no more force should be used in tightening the wire than just suffi-

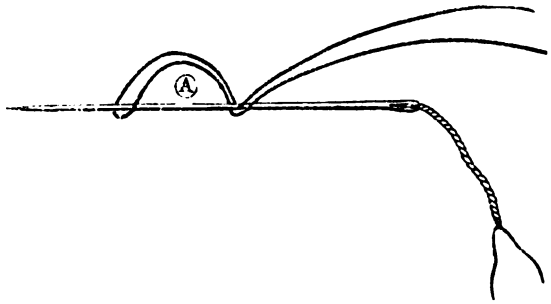

FIG. 7.—The mechanism of the third and fourth methods—viz., direct compression of the artery between the loop and the needle or pin. Third and fourth methods.

cient to stop the bleeding. It will also be found in practice that a simple half turn around the needle is sufficient to fix it securely.

The first, second, third, and fourth methods were devised and first described by Professor Simpson. The third and fourth methods are very reliable even for the larger vessels, and have a very wide range in their application.

FIG. 8.—The appearance of the parts at the termination of the first step of the fifth or Aberdeen method with a threaded needle.

Fifth Method or the Aberdeen Twist.—There are two varieties of this method, "differing from each other only in the extent of rotation given to the instrument by which the twist is effected." An armed needle or a long pin is the only instrument required in either variety.

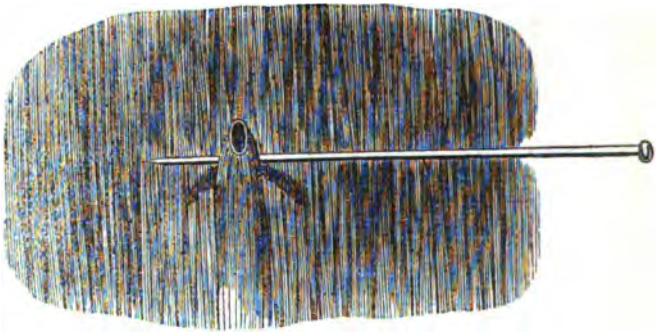

FIG. 9.—The same with a pin.

In the *first variety of the Aberdeen method* the instrument is made to undergo a half rotation. Enter the instrument a few lines to one side of the bleeding artery, pass behind it, and then make the point to emerge a few lines on the other side of the the vessel. This terminates the first stage. In the words of

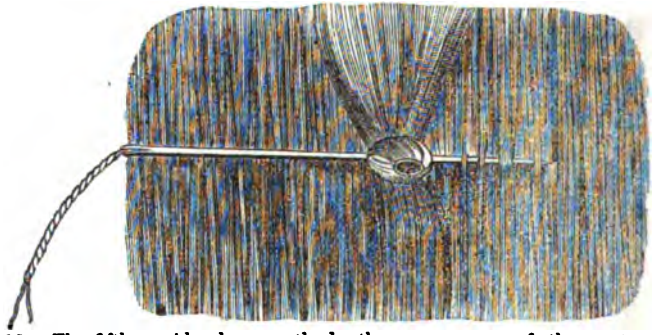

FIG. 10.—The fifth or Aberdeen method; the appearance of the parts after making the half rotation and fixing the needle.

Professor Pirrie, "the second step consists in twisting the needle or the pin to the extent of half a rotation, so as to bring its head to the side where its point was situated before making the twist; the instrument being now above, instead of below the

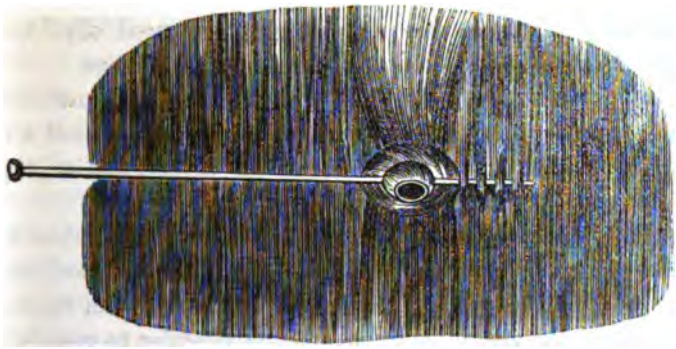

FIG. 11.—Same, with the pin

artery, and well pressed down upon it. The third step consists in sending the point of the instrument into the tissues beyond the artery for the purpose of securing it in the proper position and retaining the twist."

Second Variety of the Aberdeen Method.—This is preferable to the first variety, being more simple, requiring only a quarter

FIG. 12.—The appearance of the parts at the termination of the first step of the fifth or Aberdeen method, by the twist, before making the quarter rotation with the needle.

instead of a half rotation of the instrument used. This variety also should be considered as divided into three steps.

In the first step the needle or pin is thrust into the tissues on one side of the vessel to be secured, pressed onward a short distance parallel with the course of the artery, and at its point made to appear in the wound.

The second step consists in giving "a quarter rotation to the instrument, which places it above the artery and well pressed down against the small portion of tissues between the instrument and the vessel," and enables the operator to complete the third step by driving the point of the pin into the tissues beyond the artery, thereby securing both the pin and the twist.

One using either of these methods for the first time will be struck with the slight degree of pressure required to stop the bleeding which is all the surgeon need attempt to do.

These methods by the twist are performed with great facility, and give, perhaps, more satisfactory results than any of the others, from the fact that a minimum amount of injury is inflicted on the soft parts, and the pins or needles can be withdrawn with very little pain to the patient.

FIG. 13.—Showing the appearance of the parts after the quarter rotation of the needle, and the ultimate insertion of its point into the tissues beyond the artery.

This method was used in one case by Professor Simpson in

1860. In 1864 Dr. Knowles, at that time in the Aberdeen Hospital, suggested this mode, being ignorant of the fact that it had been devised by Professor Simpson; and Professor Pirrie applied it for the first time successfully to the femoral artery after amputation of the thigh.

One essential point in the Aberdeen method by the twist is, that the artery should not be transfixed, a procedure which has been recommended and practiced, and which I shall explain at a subsequent time.

Sixth Method.—This was devised by Dr. Keith of Aberdeen. It requires for its performance a pin and a loop of fine annealed iron wire.

Enter the pin a few lines from the artery, cause it to pass below it, and then push it on so that its point will emerge a few lines beyond the mouth of the vessel, taking care not to transfix the artery.

Now, throw the loop of wire over the point of the pin and cross the two ends behind its stem, and draw upon the wire with sufficient force to compress the bleeding vessel between *one side of the loop* in front and the pin behind; the ends are then "brought forward and finally fixed by a half twist in front of and close down upon the pin."

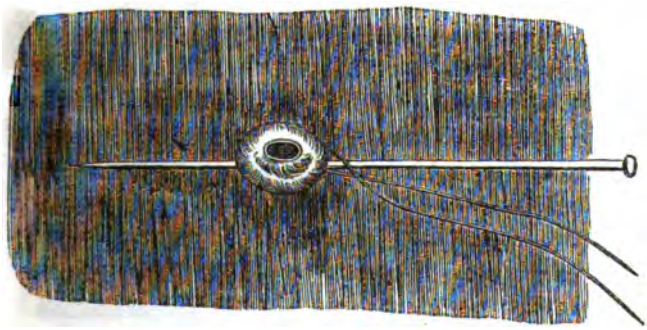

FIG. 14.—The sixth method, by means of a pin and loop of iron wire.

If more force is used in drawing upon the wire than simply sufficient to stop the bleeding, the mechanism of this method is

FIG. 15.—Skeleton diagram, showing the arrangement of the wire in the sixth method.

changed, and the artery, instead of being compressed between one side of the loop and the needle, is caught in the loop of the wire, and the *rationale* of its operation in this case is precisely that of the ligature; and, if the force be continued, the internal and middle coats are divided, and it is not acupressure at all.

Dr. Pirrie claims that, "for securing a vessel on a perpendicular wound, the sixth will sometimes be found a convenient method in circumstances where the performance of the third or fourth would be attended with difficulty."

Seventh Method.—For the performance of this method, a long pin is the only instrument required. Pass the pin from without inward; in the words of Prof. Pirrie, "through the skin, pretty deep into the soft parts, at some distance from the vessel to be secured, making it emerge near the vessel, bridging over and compressing the artery, dipping the pin into the soft parts on the opposite side of the vessel, and bringing out the point of

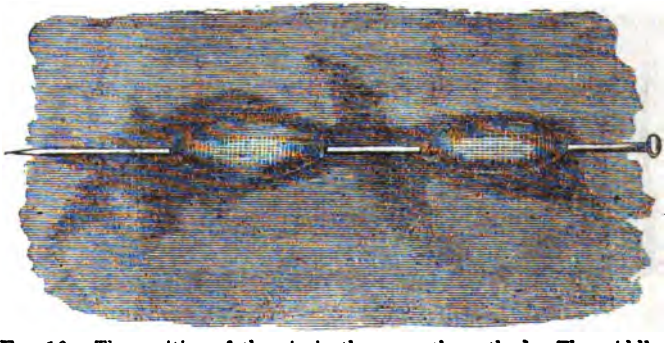

FIG. 16.—The position of the pin in the seventh method. The middle portion of the pin, in front of the integument, bridges over the artery to be acupressed; and the compression is effected between the middle portion of the pin in front and the bone behind.

the pin a second time through the common integument. The soft parts are twice transfixed, and the artery is compressed between the bone and middle portion of the needle, in front of the integument, between the first point of exit and the second point of entrance. Three portions of the needle are left without the integument; namely, its central portion and its extremities."

I have described above the seven methods of acupressure devised by Profs. Simpson and Pirrie, and by Drs. Keith and Fiddes, and extensively used in both hemispheres. These methods are simple, easily understood, and are sufficient to meet all cases where "this most excellent way of suppressing hæmorrhage" is admissible.

Various modifications or combinations of these methods may be contrived; but the principle must ever remain the same; namely, *temporary metallic compression of force sufficient simply to close the calibre of the artery without lacerating any of its coats.*

The subject of acupressure has of late attracted considerable attention in the New York Hospital, and Dr. Gurdon Buck, one of my colleagues in that institution, has devised a method for its performance which he desires should be called the New York twist, and which I shall describe as the

Eighth Method, or New York Twist.—For its performance a pair of thumb forceps and a pin or threaded needle are required.

The first step consists in seizing the mouth of the bleeding vessel between the blades of the forceps and rotating the extremity of the artery at least twice on its own axis.

The second step requires that the needle should now be thrust entirely through the twisted artery, near the forceps, and pressed on into the tissues beyond, thus securing both the artery and the needle.

The objection to this method which strikes me is, that it may with truth be said to violate the great principle of acupres-

sure, which is that we should carefully avoid any violence to the artery itself, whereas by this method the vessel is treated as in torsion, and receives in some degree the same damage as by that procedure. It has been practiced, however, by Dr. Buck, and, with some unimportant modifications, by other surgeons, with good results.

It is important that we should endeavor to simplify rather than complicate or multiply the methods.

Dr. Joseph C. Hutchison has contrived a modification of the third method, which is well adapted for application in the continuity of vessels, and which he used in all his experiments on the lower animals, to which I will have occasion hereafter to refer.

In his hands it proved to be easy of application and removal, and efficient in accomplishing the purpose for which it was intended. This method I propose to describe in his own words: "The artery is first exposed by the usual incisions; a loop of wire about eight inches long is laid in the wound parallel with and on the side of the vessel next the head-end of the pin; the pin is now carried through the flap, from its cutaneous surface, half an inch more or less (according to the depth of the vessel), back from the edge of the incision—say, to bring it down to the level or plane of the artery, and then over the wire and beneath the vessel without disturbing its vital and organic relations with the nerve, vein, or its sheath.

"When the pin has emerged from beneath the artery the wire noose is thrown over the point-end, which is then carried through the opposite flap at a point corresponding to that at which it entered. The wire loop is next brought over the track of the vessel which is now compressed between the pin *below* and the wire *above;* and lastly, the wire is fixed by a half turn around the pin. The removal of the pin, when the proper time arrives, liberates the loop, which can then be easily withdrawn."

My attention was called, soon after its publication, to the first account of the subject of acupressure in the Edinburgh Medical Journal for January, 1860, and I determined to give it an

early trial. A case presenting itself at St. Luke's Hospital, I applied the pins on the 6th of March, 1860.

This I believe to have been the first trial of acupressure made in this city, if not in this country. The case, which is recorded in the New York Journal of Medicine for May, 1860, page 424, is as follows:

CASE 1ST. *Excision of Mamma; Acupressure by the First Method.*—Jane Pierson, England, aged 33, was admitted into St. Luke's Hospital with a cancer of the breast.

On the 6th of March, 1860, I removed the mamma by the usual incisions, which were prolonged into the axilla for the removal of a mass of glands in that region which were contaminated. Three long pins were applied by the first method, and the bleeding ceased. No ligatures used. The flaps were accurately coaptated, and union by primary adhesion followed throughout its entire length, except a small opening in the axilla for the egress of puss consequent upon the thorough removal of the glands. The needles were withdrawn three days subsequent to the operation. No trouble ensued, and the patient had a complete and rapid recovery.

The needles in this case were left in much longer than necessary, as the method was tried by me for the first time, and I hesitated to trust to an earlier removal. Acupressure was used soon after in the New York Hospital by Drs. William H. Van Buren and T. M. Markoe.

CASE 2D. *Amputation of Forearm; Acupressure by the First Method.*—Hugh Robinson, aged 23, admitted to New York Hospital March 17, 1860, with compound fracture of metacarpus. Case was attended with sloughing, etc., and amputation of forearm was performed by Dr. Wm. H. Van Buren April 26, 1860. Three common Berlin pins were used. One each, by the first method, for the radial and ulnar arteries. The third needle "pierced through directly the interosseous space, compressing the vessel to the outer border of the radius." Wound was closed by silver sutures, and cold water dressings applied.

Needles were removed *forty-eight hours* after the operation. Union by primary adhesion "throughout deeper portion of the stump, and but a slight linear ulceration being visible at its periphery." Patient discharged, cured, May 19, 1860.

CASE 3D. *Amputation of Leg; Acupressure by the First Method.*—William B. Strachan, aged 35, admitted to New York Hospital April 22, 1860. Amputation was performed by Dr. Markoe (May 29, 1860) "a hand's breadth below the tubercle of the tibia." Five needles were introduced for the anterior and posterior tibials, two surals and one circumflex artery. Three muscular branches were also strongly twisted, controlling all hæmorrhage; stump sutured with silver wire, and cold water dressings applied. Needles were withdrawn *seventy-two hours* after the operation, "leaving five suppurating tracks."

June 6th.—"Stump has united throughout its anterior half by first intention" (primary adhesion?). "Moderate discharge from lower portion."

June 23d.—"No suppuration from needle tracks, and but slight discharge from stump." Suppuration within the knee-joint afterwards set in, extending up the thigh, and patient died July 30, 1860.

Autopsy showed abscess above and below the knee-joint, communicating with it. No collection of pus in lungs, liver, or kidneys. Heart healthy. Head not examined.

In this case the needles were left in too long a time, thus accounting for the suppurating tracks remaining after their withdrawal.

From this time until December, 1868, a period of over eight years, the carefully kept records of the New York Hospital show no case in which acupressure was resorted to. Why this is so it is difficult to say except that owing to the few methods of its application then in vogue, and the fact that new measures are accepted with hesitation, we declined to forsake an old and tried friend for a new one. So much, however, has in the mean time been said and written upon the subject, and its methods

so enlarged and improved, that our attention has again been challenged.

CASE 4TH. *Amputation of Arm; Acupressure by the Third Method and the "Aberdeen Twist."*—Peter Bobalinger, aged 50, admitted to New York Hospital December 21, 1868, with compound fracture of radius and ulna, and extensive laceration of soft parts. Amputation in the upper third of the arm was performed, four and a half hours after the injury, by Dr. Krackowizer, by circular method. The brachial artery was secured with a needle and loop of silver wire by the third method. A second bleeding vessel was secured by the fifth method. The needles used were the ordinary glover's needle. Wound closed with silken sutures and cold water dressings.

The needles were withdrawn *forty-eight hours* after the operation with the aid of Dr. Gurdon Buck's instrument. There was no primary union. The stump healed by second intention, and patient was discharged, cured, February 16, 1869.

In this case nothing, I think, was gained by substituting acupressure for the ligature. There was no attempt even at union by first intention, which was due in all probability to the nature and extent of the original injury. Where such must be the almost inevitable result, I should claim no advantage in the use of the needles.

Allusion is made above to an instrument contrived by Dr. Buck to facilitate the removal of the armed needle from the wound. It consists of a thin steel rod about three inches in length, provided at one end with a handle, and at the other with a small immovable steel ring; both the handle and ring stand off at right angles to the shaft of the instrument. The wire attached to the needle is passed through the ring, the instrument is then carried down through the lips of the wound, along the wire as a guide, to the eye-end of the needle. The instrument is then pressed firmly down in its place, and the needle and wire withdrawn.

If, after the introduction of the armed needle in acupressure,

care be taken, before closing the wound, to carry out the wire in a straight line with the needle, and also to avoid all kinking when you desire to withdraw it, no helping instrument will be needed—only draw carefully upon the wire, and the needle will readily follow.

CASE 5TH. *Amputation at Knee-joint; Acupressure by Eighth Method and the "Aberdeen Twist."*—Edward Powers, aged forty, admitted into New York Hospital, December 3, 1868, with compound fracture of the leg, occurring the evening before admission. Amputation at the knee-joint was performed by the house surgeon (Dr. John A. Beekman) under the direction of the attending surgeon, twenty-one hours after the injury. The popliteal artery was secured by the "New York twist, one other vessel was secured by the "Aberdeen twist." The wires, which were of silver, were brought out at the angle of the wound, and the flaps closed with silken sutures. The needle securing the smaller vessel was removed *forty-eight hours* after the operation, by the help of Dr. Buck's instrument, with great ease. In attempting to withdraw the needle from the popliteal artery, with the aid of Dr. Buck's guide, the wire broke close to the needle, leaving it still in the wound. On the following morning the needle was found loose, and protruding from the lips of the wound. No primary union.

CASE 6TH. *Amputation of Thigh; Acupressure by the Third and Eighth Methods.*—Christopher Ferris, aged fifty-three, admitted to New York Hospital November 7, 1867, with compound fracture of the thigh. There has been only slight ligamentous union. Would not consent to amputation, although repeatedly advised to submit to it, until recently. Has been confined to bed almost the entire time. The muscular tissue has undergone, to a great extent, fatty degeneration. The parts very stiff and unyielding. Amputation of thigh in middle third, by circular method, performed January 5, 1869, by Dr. Krackowizer. An attempt was made to secure the femoral artery by the "New York twist," but the vessel was too much

calcified to permit the twisting movement. It was accordingly secured by the third method without difficulty. Five other vessels were secured by the "New York twist." Needles used were round and electro-plated. Wound closed with silken sutures. All the needles were removed *forty-eight hours* after the operation. No primary union. Patient still in hospital.

This case illustrates the perfect reliability of the third method with the needle and loop of wire. No matter what may be the condition of the artery, by this method a sufficient quantity of the surrounding soft parts is included to protect its walls from injury as the loop is tightened.

CASE 7TH. *Amputation of Thigh; Acupressure by the Fifth and Eighth Methods.*—John Doyle, aged ten, admitted to New York Hospital January 17, 1869, with compound fracture of the leg. Amputation was performed by the house-surgeon (Dr. T. E. Satterwaite), under the direction of the attending surgeon. *Femoral artery* secured by "New York twist"; three other vessels by "Aberdeen method." Needles removed *forty-five hours* after operation. There was considerable primary adhesion. Patient died of pyæma February 11, 1869.

CASE 8TH. *Excision of Mamma; Acupressure by Fifth Method.*—Sarah White, aged forty, admitted to New York Hospital January 21, 1869, with enchondroma of the breast. Breast was removed by the ordinary incisions by Dr. Krackowizer January 21, 1869.

Eight arteries were secured by the fifth method. Wound was left open for six hours until surface should become glazed. A needle securing a small vessel was then (six hours after operation) removed, followed by severe hæmorrhage. The needle was reapplied, and wound closed with silken sutures. All the needles, with the exception of one, which was overlooked, were removed *forty-eight* hours after the operation. The remaining one was removed *seventy-two* hours after operation. No primary union.

This case should inculcate the necessity of keeping an accu-

rate account of the number of needles left in the wound, so that none may be overlooked in the removal. If the wire with which the needle was armed had been longer, this accident would not have occurred.

CASE 9TH. *Amputation of the Shoulder-Joint; Acupressure by the Fifth and Eighth Methods.*—Richard Sheehan, aged forty-seven, admitted to New York Hospital February 5, 1869, with accidental amputation of the arm. Dr. Buck performed amputation at the shoulder-joint soon after admission. No regular method was pursued, owing to the extensive laceration of the soft parts. A large posterior flap was formed; acupressure to the axillary artery by "New York twist," and to *seven* other vessels by "Aberdeen method." Needles removed, *sixty-seven* hours after the operation, with "Buck's guide." Very little primary union. The needle securing the axillary, which had been thrust through the artery, and thence through the capsular ligament of the shoulder-joint, where it leaves the neck of the scapula, was withdrawn with some difficulty. Patient was doing pretty well until the 17th instant, when at 6 o'clock A. M. he suddenly died.

I shall give the *post mortem* appearances in this case, which were very accurately observed in a subsequent part of this paper, when the subject of the pathological mechanism of acupressure is discussed.

The imperfectly kept records of St. Luke's Hospital show that Dr. Robert F. Weir, one of the surgeons to that charity, revived acupressure with success in 1867, and was followed by others.

CASE 10TH. *Amputation of Arm; Acupressure by Fifth Method.*—Henry Kern, aged thirty-five, admitted to St. Luke's Hospital August 8, 1867, with compound, comminuted fracture of arm, involving elbow-joint. Primary amputation was performed by Dr. Weir at junction of superior and middle third. Seven small arteries were secured by the fifth method; the brachial artery with a silk ligature, Dr. Weir fearing to trust to

the needle. Needles removed *forty-eight* hours after operation; the ligature came away on the eleventh day. No hæmorrhage. Stump healed by primary adhesion, except in the track of the ligature.

Had acupressure been used to the brachial, *entire primary union* might have been obtained.

CASE 11TH. *Amputation of Thigh; Acupressure by Fifth Method.*—Thomas Crehan, aged eighteen, admitted to St. Luke's Hospital August 21, 1867, with dislocation of knee from chronic arthritis. Amputation of convenience, through middle third of thigh, was done by Dr. Weir. Femoral and three smaller vessels secured by fifth method. Needles removed, three after *forty-eight* hours; the fourth, from the femoral, was so firmly retained by oxidation that it was not removed until *seventy-two* hours had elapsed. No hæmorrhage followed.

Patient died of uræmic convulsions September 25, 1867. In this case there was no attempt at primary union.

CASE 12TH. *Amputation of Forearm; Acupressure by Fifth Method.*—Patrick Rowan, aged forty-six, admitted to St. Luke's Hospital July 25, 1868, with compound, comminuted fracture of right forearm, with other severe injuries to left hand and arm. Two hours after the accident Dr. Buck amputated the right forearm.

Three vessels were secured by the fifth method, and wound closed with silver sutures. Subsequently, on account of hæmorrhage, one of the needles was removed and a silk ligature applied. *Forty* hours after the operation one needle was removed, and on the *fourth* day the remaining needle.

Previous to the removal of the latter it was necessary to open the wound to facilitate the escape of pus.

August 6th, patient had severe rigors and sank, and died nineteen days after the operation.

In this case could not the needle have been effectually reapplied to the bleeding vessel, so as to obviate the necessity for

the silk ligature? and why was one needle left until the fourth day?

CASE 13TH. *Excision of Mamma; Acupressure by Third and Fifth Methods.*—Mrs. Anderson, aged sixty-eight, admitted to St. Luke's Hospital May 2, 1868, with cancer of the breast. Breast was removed by Dr. Robert F. Weir, May 4, 1868. Two vessels were secured by acupressure—one by the third method, the other by the fifth. Needles removed *twenty-four* hours after operation. Wound almost entirely healed by primary adhesion. Suppuration and erysipelas followed, and death occurred ten days after operation.

CASE 14TH. *Amputation of Thigh; Acupressure by Third and Fifth Methods.*—Thomas Hurd, aged thirty-three, admitted to St. Luke's Hospital March 9, 1868, with encephaloid cancer of the leg. Amputation of thigh at junction of upper and middle third was performed by Dr. Buck March 13, 1868. Femoral artery was acupressed by the third method, the other bleeding vessels by the fifth method. One of the needles from a smaller vessel was removed after *forty-five* hours; the remaining needles in *seventy* hours after the operation. No hæmorrhage. Patient died March, 29, 1868. In this case the exhausted condition of the patient induced Dr. Buck to leave the needle on the femoral artery this unusual length of time.

Dr. James L. Little, of this city, has kindly furnished me a brief record of the following cases, in which he has used acupressure:

CASE 15TH. *Amputation of Breast; Acupressure by "Aberdeen Twist,"* with small needles. Needles removed *twenty* hours after operation. No hæmorrhage.

CASE 16TH. *Amputation of Thigh; Acupressure by Third and Fifth Methods.*—Amputation through lower third of thigh for railroad injury. Skin-flaps and circular incision through the muscles. Femoral artery secured by the third method, the smaller vessels by the fifth method. Needles from smaller vessels removed on the *second* day. The pressure on femoral artery

was allowed to remain until the *fifth* day, as the patient was constantly vomiting. No hæmorrhage followed the removal of the needles. Patient died on seventh day from the effects of shock. Stump in excellent condition.

Where the larger arteries are acupressed, and persistent vomiting follows the operation, the needles should be left on longer than is ordinarily necessary, as the constant pumping of blood with such force might break down the new and tender adhesions by which the vessel is closed, and secondary hæmorrhage result.

CASE 17TH. *Removal of a Glandular Tumor of the Breast.* Incision about three inches in length. One artery secured by first method, with a long needle. Needle removed *twenty* hours after, and the sutures on the third day. Wound healed by the first intention without one drop of discharge.

This is an example of union by first intention as distinguished from that by primary adhesion. This distinction is insisted upon by Paget and others.

CASE 18TH. *Removal of a Large Adipose Tumor from Outside of Thigh.*—Incision seven inches long. Two bleeding arteries secured by first method. Pin sutures used to secure accurate coaptation.

Needles removed *twenty* hours after operation, sutures on the third day. The wound healed entirely by "the first intention." One ligature would have prevented this result.

CASE 19TH.—During the operation of *external urethrotomy* the bulbous portion of the urethra was wounded; the hæmorrhage was quite free. A compress was applied, which failed to arrest the bleeding. Several attempts to apply a ligature were unsuccessful. Acupressure done in the following manner succeeded: "The bleeding surface was seized with a pair of toothed forceps, and a short needle was introduced as in the first method, embracing the bleeding surface, which was about half an inch in length. A loop of iron wire was then twisted over the needle as in the third method, and the bleeding was completely

arrested. Needle and wire removed *nineteen* hours after the operation."

Acupressure in this case was done virtually by the third method.

The fact that the ligature applied, in the ordinary way, to the continuity of the larger arteries for the cure of aneurism, etc., necessitated the slow separation by ulceration, thereby preventing primary adhesion in the wound, and subjecting the patient to the danger of secondary hæmorrhage, pyæmia, etc., induced surgeons long ago to search for some method by which an artery could be ligated temporarily for a certain number hours, necessary to produce adhesion between the walls of the vessel, and then by the removal of the ligature to obviate these dangers.

Dr. Jones, by his experiments on animals, found that several divisions of the inner and middle coats of an artery, within a limited space, caused effusion of lymph in sufficient quantity to obliterate its tube, even when the ligatures were removed soon after the operation.

M. Amussat recommended the same procedure.

Mr. A. C. Hutchison, in the year 1800, tied the brachial arteries of two dogs, and removed the ligatures immediately; the effect was complete obliteration of the canal of the artery. Others at about the same time tried these experiments without the same success.

The fatal objection to this method by several ligatures was, that their application necessitated too great separation of the artery from its vital connections with its sheath and surrounding tissues, cutting off its nutrition, and thereby endangering its vitality.

Mr. Travers found, by experiments on the carotid artery of the horse, that a single ligature applied, and then removed at the expiration of from one to six hours, procured adhesion sufficient to effect the permanent obliteration of its tube.

Sir Astley Cooper tried the above method on the human subject for popliteal aneurism, removing the ligature after *thirty-two* hours; and, pulsation returning, applied it again for *forty* hours;

after which there was no recurrence of the pulsation; but secondary hæmorrhage occurring on the *twelfth* day, it was again necessary to secure the vessel.

Others repeated the operation on the human subject, with various modifications, but it was abandoned, as it seemed to be impossible to fix a determinate period when the ligature could be withdawn, with the assurance that obliteration of the artery would ensue.

Scarpa was the great advocate of this practice, with this improvement on those who preceded him. They divided the inner and middle coats, deeming this essential to the success of the operation. He endeavored to avoid this, merely bringing the walls in coaptation, by the interposition of a small cylinder of lint, spread with ointment, between the knot of the ligature and the artery. This, however, denuded the artery to a considerable extent, and was open to the serious objection of introducing, and allowing to remain in the wound, a considerable mass of foreign material.

A variety of metallic compressors have been contrived in times past, and applied to the exposed artery for the purpose of rendering it impervious. Among them may be named the serre-nœud of Dubois, Assalini's compressor; the presse-artere of Deschamp, an instrument contrived by Mr. Crampton, and the pincers of Baron Percy. With these instruments they succeeded in producing obliteration of the artery without rupture of any of its coats. Notwithstanding the fact that entire success followed their use, by men greatly distinguished in surgery, the profession generally refused to accept their views, and clung to the old method by the single ligature.

The chief objection to most of these contrivances seems to be the necessity for great stripping and exposure of the artery in the operation.

The fact that temporary metallic pressure, by means of the needle and wire, does, with less exposure of the artery than by the ordinary ligature, obliterate its calibre, is now so well

established by the experience in acupressure, that the interest of surgeons in this subject is rekindled.

Within the past few months I have applied acupressure with entire success to the femoral artery for popliteal aneurism by a method which I shall describe. The case is one of such interest, apart from acupressure of the artery, that I hope to be pardoned for narrating it *in extenso*.

CASE 20TH. *Temporary Ligature of Femoral Artery for Popliteal Aneurism.*—Leopold Kah, Germany, aged twenty-nine, was admitted to New York Hospital October 20, 1868. A few weeks ago patient first noticed a swelling in popliteal region which was painful, and soon rendered him incapable of work. He was seen by three physicians, each of whom seem to have mistaken the nature of the tumor, as they opened it with the knife by small incisions three times in as many days. The openings made by the first two physicians were followed by a sharp spirt of blood, which seemed to surprise them, as they each stitched up the wound and left him to the tender mercies of a third, who, making a bolder dash than his predecessors, was appalled by the gush of about two quarts of blood; he hurriedly bandaged up the limb and abandoned his patient, who was then brought to the hospital. On admission he was almost pulseless and excessively prostrated from loss of blood. The lips of the wound made into the aneurismal sac were sloughy.

October 21, 1868.—I secured the common femoral artery by the following method, at the suggestion of Dr. Buck: The artery was exposed in Scarpa's triangle by the usual incisions. The sheath of the vessel was opened barely sufficient to allow a small aneurism needle, armed with a piece of strong, smooth, moderate sized hempen twine, to be passed round the artery; the ends of the ligature were threaded through a small silver *double canula*, about two inches in length, and the canula passed on through the wound down upon the artery. The ligature was then drawn tight enough to stop the circulation, but not with sufficient force to lacerate the coats of the vessel, and the ends

tied over the external extremity of the canula. The canula was then secured in a position at a right angle to the artery, against a roller-bandage placed on the thigh, and the roller in its turn was kept in place by adhesive straps. Wound was closed by silken sutures. Union by primary adhesion took place throughout the wound, except in the track of the instrument.

The ligature was removed with great ease *forty-seven* hours after the operation, and no blood followed it. The edge of the skin-flaps subsequently took on ulceration, but the union of the deeper parts was not disturbed. No pulsation could be detected below the point of acupressure, and the tumor was much diminished in size.

The threatened sloughing of the sac progressed until finally a cavity was left in the popliteal space in which a large fist could be buried. Owing to the great loss of blood which had occurred previous to his admission to the hospital, gangrene of the foot and leg supervened, necessitating amputation at the knee-joint, which was done November 13, 1868, by irregular flaps as sound skin could be found.

The patient eventually recovered, and was discharged, fat and hearty February 8, 1869, with a good stump.

CASE 21ST. *Dr. Buck Applied a Temporary Ligature to the Femoral Artery, for Popliteal Aneurism, at St. Luke's Hospital September* 23, 1868.—Patient a young man, aged twenty-four. Femoral artery was exposed in the usual manner, and a silver wire (No 26) placed under the artery; the ends were then crossed over it and secured by three half turns or twists. On the third day the wire was removed, but it was found necessary to re-open the wound, in order to untwist the wire without endangering the artery. No hæmorrhage, except from the disturbed adhesions, followed the wire, and after a reasonable time the patient was discharged cured.

Dr. Buck also applied acupressure by this same method, with the twisted silver wire to the subclavian.

CASE 22D. *Artery; for Axillary Aneurism.*—This operation

was done at St. Luke's Hospital, but it was found impossible to remove the wire by untwisting without endangering the artery. It was therefore allowed to remain until it had cut through the vessel. Patient discharged cured.

CASE 23D.—Dr. Markoe used acupressure by this same method, at New York Hospital, September 29, 1868, on a man aged thirty-five, who was admitted with popliteal aneurism. He passed a fine iron wire around the femoral in Scarpa's triangle, and secured it by three twists; wire removed *seventy-two* hours after operation. In this case also it was found necessary to re-open the wound in order to untwist the wire. Gangrene of foot afterward set in, and the patient sank into a typhoid condition and died November 13, 1868. "The artery at the point of ligature was found slightly thickened, reddened, and its calibre but little diminished. The vessel was pervious, but a long thin clot, three inches in length, was found in it, extending on either side of the point of pressure."

The difficulties attending the removal of the wire, in the cases of Drs. Buck and Markoe, led me to prefer the textile ligature and the canula to the twisted wire, which is in itself without doubt more purely acupressure. If I were to use the same instrument again I should substituie a small lead wire for the hempen twine. The objection to iron or silver wire is, that in removing it on so short a turn round the artery I should fear injury to its coats.

Dr. Hutchison's modification, which I have described already, would, I think, answer admirably for application in the continuity of arteries.

In the application of acupressure to the continuity of a vessel for aneurism, it seems to me that the amount of pressure used should be sufficient to cut off the circulation at once, so that the consolidation shall be rapid, enabling us to remove the needle after the shortest time has elapsed consistent with safety; for, if the pressure be too long continued the artery will be cut through as by the ligature.

Tabular View of Foregoing Twenty-three Cases.

NO.	OPERATION.	AGE.	METHOD.	ACUPRESSURE DISCONTINUED.
1	Excision of mamma	33	First method	72 hours.
2	Amputation of forearm	23	First method	48 "
3	Amputation of leg	35	First method	72 "
4	Amputation of arm	50	Third and fifth methods	48 "
5	Amputation of knee-joint	40	Fifth and eighth methods	48 "
6	Amputation of thigh	53	Third and eighth methods	48 "
7	Amputation of thigh	10	Fifth and eighth methods	45 "
8	Excision of mamma	40	Fifth method	48 " looked. 72 " needle over-
9	Amputation at shoulder-joint.	47	Fifth and eighth methods	67 "
10	Amputation of arm	35	Fifth method	48 "
11	Amputation of thigh	18	Fifth method	48 & 72 hours.
12	Amputation of forearm	46	Fifth method	40 & 90 "
13	Excision of mamma	63	Third and fifth methods	24 "
14	Amputation of thigh	33	Third and fifth methods	45 & 70 "
15	Excision of mamma	.....	Fifth method	20 "
16	Amputation of thigh	.....	Third and fifth methods	48 & 120 "
17	Removal of glandular tumor of the breast	.....	First method	20 "
18	Removal of adipose tumor of the thigh	.....	First method	20 "
19	Wound of bulb of urethra	.....	Third method	19 "
20	Acupressure of femoral artery for popliteal aneurism	29	Double silver canula and loop of hempen twine.	47 "
21	Acupressure of femoral artery for popliteal aneurism	24	Twisted silver wire	72 "
22	Acupressure of subclavian artery for axillary aneurism	35	Twisted silver wire	Not removed, but allowed to cut through.
23	Acupressure of femoral artery for popliteal aneurism	35	Twisted iron wire	72 hours.

We have here twenty-three cases, never before reported, in which acupressure has been used—five times to the femoral artery after amputation of the thigh; three times to the femoral as a temporary ligature in the treatment of popliteal aneurism; once to the axillary artery after amputation at the shoulder-joint, and to many less important vessels.

In only one case was the use of the needle followed by secondary hæmorrhage, and in that case this accident was evidently due to its careless application.

As most of the above cases occurred in hospital practice, where primary union has been the rare exception when the ligature has been used, I think it may be fairly claimed for acupressure, that it greatly increases the chances for that most desirable result.

Before considering the special advantages of acupressure as a hæmostatic agent, it is desirable that we should determine *the*

pathological mechanism by which it causes obliteration of an arterial tube.

The few treatises on acupressure which appeared before Dr. J. C. Hutchison's essay was read before the State Medical Society give us but little light, shed by actual experiments performed on the arteries of lower animals, or from accurate observation of the *post mortem* appearances of arteries so treated in the human subject. The fact that acupressure could be relied upon for checking hæmorrhage was established, but how the vessel was permanently closed was the question.

Dr. Hutchison devoted much time and patient investigation to this subject, and I now propose to give in brief the results obtained. He perfermed seven distinct experiments with acupressure on the common carotid arteries of sheep and dogs:

First Experiment consisted in exposing by dissection the left common carotid of a sheep, and closing it by a pin and wire, according to the method which I have described above, as devised by himself; the vessel was then divided on the distal side of the pin. Free hæmorrhage occurred from the distal end of the divided artery; this was arrested by another pin without disturbing the vital connections between artery, vein, and nerve in their sheath. Removed both pins at the end of *forty-one* hours.

Dissection.—The animal was killed twenty-five days after the operation.

"The artery, vein, and nerve were matted together by inflammatory deposits." After carefully removing a considerable portion of the artery, both ends were found closed at the point of acupressure, it being impossible to force air through it by the blow-pipe while the artery was held under water.

"On opening the vessel, no clot was found in either the distal or cardiac ends, but they were firmly closed by being transformed into a dense fibro-cellular tissue for the extent of one-third of an inch." A careful microscopic examination revealed the fact "that the artery at the place of operation had been cemented to surrounding tissues by organized exudation, so that the continuity of the vessel was demonstrated only by

dissection. Lymph had been effused, both within and without the vessel, at the point of acupressure, and the extremities were connected together by firm fibrous tissue."

Second Experiment was performed on the right common carotid of a sheep by two needles, half an inch apart, and the artery was divided between them. Pins removed at the end of *forty-one* hours.

Animal killed twelve days after the operation. A portion of the artery was removed, and by the blow-pipe test both ends were found perfectly closed. A small clot was discovered within the artery, both upon the distal and cardiac side. "The bases of both clots were decolorized, and adhered firmly to the internal coat of the vessel. . . . The extremities of the artery were converted into a dense fibro-cellular cord, and its coats surrounding the clot were three or four times their usual thickness, and the calibre diminished."

Third Experiment, upon the common carotid of a sheep, with a single acupressure pin applied in its *continuity*, for the purpose of ascertaining the condition of the vessel under such circumstances; but the experiment yielded no results, as the wire was drawn so tight that the internal and middle coats were divided, giving *post mortem* appearances precisely such as are found after the use of the ligature by the ordinary method.

Fourth Experiment.—Two pins were passed under the common carotid of a sheep, three-quarters of an inch apart, and the vessel divided between them. By an oversight the pins were not removed until after the lapse of *seventy-four* hours. Animal was killed four days after the operation. By the blow-pipe test both extremities were found completely closed. A conical clot was found in both the distal and cardiac ends, which clots were adherent by their base to the internal coat.

Fifth Experiment.—The common carotid of a dog was closed by acupressure in its continuity. Needle removed after *twenty-five* hours, and the animal killed on the seventh day. The artery was agglutinated to the surrounding tissues, and was entirely impervious by the blow-pipe test. Upon both the

cardiac and distal side of point of pressure there was a clot. "*The clot was continuous, and at the point at which the needle was applied it was firmly adherent to the internal coat of the vessel.*" The internal or middle coats of the artery were thickened at point of acupressure, thus diminishing its calibre.

Sixth Experiment.—Acupressure pin applied to common carotid of a sheep in its *continuity*, and removed after *forty-seven* hours.

The vessel was at the same time vivisected. Artery found completely closed.

A continuous clot occupied the vessel on each side of the point of acupressure, as in experiment No. 5. "The clot was intimately connected with internal coat of the artery at the seat of pressure, and the vessel was slightly contracted at this point."

Dr. Hutchison explains the continuity of the two clots in experiments Nos. 5 and 6 "by supposing that some thinning of the walls of the vessel was produced by the pressure of the pin, which became loosened and allowed the vessel to expand.

Seventh Experiment.—Acupressure to common carotid of a dog, in its continuity, by a single pin. The pin removed in *twenty-nine* hours, and the animal was killed *twenty-five* days after the operation.

The artery was removed, and "one-third of an inch of the vessel, at the seat of acupressure, was converted into a solid fibrous cord, in which no trace of the arterial coats could be found," under the microscope.

"On both the distal and cardiac sides of the solid portion were found remains of a red clot." This specimen shows the *ultimate* changes which take place after acupressure.

Eighth Experiment.—Dr. C. M. Bell, curator of the New York Hospital Museum, November 24, 1868, applied Dr. Buck's modification of acupressure (which method I have already described) to the left common carotid of a sheep, in about the middle of its course. On the next day faint pulsation could be felt just above the point of pressure—apparatus tightened. On the second day there was no pulsation at this point. *Seventy*

hours after the operation there was no pulsation for the last *forty-six hours*, the instrument was withdrawn without any difficulty. There was primary union, except where the canula entered. The animal was killed after *sixty-two* days, and a portion of the artery removed by dissection. "Remarkably little change in the tissues surrounding the vessel. At the point of acupressure the artery was slightly expanded, bulbous. This bulbous appearance was quite perceptible because of the diminished size of the artery above and below this point. On slitting up the artery it was found occluded, at the expanded portion above mentioned, by a firm tissue one-quarter of an inch in length, of fasciculated appearance, which proved, when examined by the microscope, to be fibro-cellular tissue. This tissue was firmly adherent to the internal coat of the artery; while this coat, for about one-quarter of an inch above and below, was thickened and infiltrated, as if the fibrous plug had been formed by lymph exuded by the internal coat alone."

Ninth Experiment.—Dr. Bell also applied acupressure, by means of the same method, to the right common carotid of a sheep, just below its bifurcation. Only sufficient force was used to stop the circulation. At the end of *forty-eight hours* the apparatus was removed. The animal was killed *eighty-two* days after the operation. The artery was found pervious, but diminished in calibre for three or four inches below its bifurcation, and its coats were thickened at the point of acupressure. In this case it would appear that the experiment failed only because sufficient care had not been used to preserve the acupressure, throughout its application, sufficiently firm to entirely stop the current of blood at that point.

A third experiment of Dr. Bell's obliterated the artery at the point of acupressure, but, owing to the fact that the ligature was drawn so tight as to lacerate somewhat the internal coat, the occlusion cannot be considered as due to pure acupressure. The results in this case were similar to those obtained in Dr. Hutchison's third experiment. These experiments of Dr. Bell's have never been published. In connection with the experiments

on the lower animals, I shall relate the *post mortem* appearances presented in the axillary artery of the patient, on whom Dr. Buck amputated at the shoulder-joint, and given in my narrative of cases as *case 9th*. I cannot improve upon the careful and minute description given by the curator, Dr. Bell, and shall therefore copy it verbatim from the hospital case-book:

Post Mortem Appearance in the Axillary Artery of Richard Sheehan. (See case 136, vol. xxxviii., 1st Surgical Divison.) "With some little difficulty the end of the axillary artery was discovered firmly adherent to the contiguous tissues, so firmly adherent that it required the knife to separate them. These having been carefully dissected away, the immediate extremity of the artery was found patulous, the artery slightly twisted upon its axis, and just within its open mouth could be seen the rounded base of a yellowish plug. It was found that the axillary had been compressed one-quarter of an inch below the origin of the posterior circumflex (which was of large size, and had also been compressed), and a half inch below the subscapular. After demonstrating the fact that the axillary was entirely occluded, the artery was slit up and found to have been closed by a firm disk-plug three-eights of an inch long, of a color varying from yellowish white to a dusky red, which presented the appearance of a coagulum undergoing organization. This plug was not conical in shape, only gently rounded at its apex and base, and was adherent throughout its length to the inner surface of the artery. It could, however, be stripped up from the artery, requiring some little force—seeming to be glued to it by the interposition of some material unlike that composing the clot. This material proved on minute examination to be lymph, the exudation being more abundant and the union more apparent where the pressure had been immediately applied. The internal surface of that part of the artery which was in contact with the clot was reddened, roughened, and the coats somewhat thickened, and firmly contracted on the enclosed plug, reducing its calibre, but not perceptibly diminishing its size. It was found that the posterior circumflex had also been twisted and com-

pressed one-quarter of an inch from its origin, and in addition to the clot—which in the axillary passed over its mouth and occluded it—it contained a firm white clot, not, however, adherent to its internal surface, except at its base.

"Around the base of this clot the cut extremity was found contracted and united as if by adhesive inflammation, forming a distinct *cul-de-sac*. This union was very slight, if at all, between the internal surface, but between the cut extremities of the artery it was quite firm. Its walls, like the axillary, were thickened and reddened. In the subscapular artery was found a long (one and a quarter inch) forked and detached clot."

The above experiments and observations teach us very clearly the way in which an artery is closed after acupressure. We have the clot and the adhesion which closes the vessel entirely—converting it into a fibrous cord—and this result we obtain with positive certainity, without any wound of the internal and middle coats, and the consequent active inflammation between the cut surfaces.

The ligature does not close the calibre of an artery with more certainty nor more perfectly. It therefore seems to me proven that acupressure is the safer method, as by it we avoid that high degree of inflammation induced by the ligature, advancing to the stages of ulceration, suppuration, and mortification.

I believe that this advantage possessed by acupressure over the ligature renders it much safer when properly applied, for an artery in its continuity, in the cure of aneurism. I say when properly applied, for great care must be used in the election of a method which shall present a smooth metallic surface to the vessel, thereby avoiding ulceration of its coats. Ligatures never come away from an artery tied for several days, and if the vessel be of large size, or any of the surrounding tissues be included within its grasp, it may not come away for weeks. It is only by the process of ulceration and sloughing that it is released. During all this time there cannot be complete union between the lips of the wound—the ligature acting as a foreign body and suppuration existing of necessity along its track. Several liga-

tures are generally required, which are twisted together and brought out at the angle of the wound; these constitute a seton, and from their foulness increase the dangers of septic poisoning.

There is also danger that, when the ligature separates, the artery may not be entirely occluded, the ulcerative process having opened the vessel beyond the point of closure, and secondary hæmorrhage result. With acupressure this accident does not occur.

The necessary laceration of the coats of an artery when torsion is practised, and the probable detaching of considerable portions of the lacerated tissues, must be followed by sloughing and suppuration, thus interfering with primary union, and adding the danger of pyæmia to the other complications. By the use of acupressure we escape these hazards, are enabled to remove the pins at any time, thus placing the wound in the most favorable condition for primary union. Soon after acupressure began to be extensively used abroad, Prof. Syme and others revived torsion as an opposition hæmostatic measure.

During the year past, Prof. Syme, in Edinburgh, whom I am informed would never even look at a trial of acupressure, and Mr. Lister, in Glasgow, have used torsion in nearly all their cases, and in both hospitals the mortality has been about one in two, to one in two and a half, and this, notwithstanding the fact that carbolic acid has been freely used. I have authority for the above statement.

Surely such experience does not offer much encouragement for the practice of this measure.

As to the *time* for the removal of the pins, much has yet to be learned. *Forty-eight* hours for the larger, and *twenty-four* hours for the smaller vessels, seems to be the outside limit of necessity, but I doubt not that a much shorter time will ultimately be found ample for all requirements. Indeed, cases are recorded where the pins have been accidentally removed from the cut end of the femoral artery, after amputation, in *four hours*, and from the posterior tibial artery in *twelve hours*, and in neither case did secondary hæmorrhage ensue.

It is also matter of no little importance that, for the *few hours* in which it is necessary to have any foreign body in the wound, that the substance should be of a less irritating kind than silk or any textile fibre. Where the coats of an artery are so much diseased as to render it impossible to secure it by the ligature, the acupressure needle can be used with perfect safety.

After operations, bleeding from the open mouths of large veins frequently gives much trouble. The application of the needle checks it, and, as the pressure can be removed at any time, obviates the danger arising from the use of the ligature under such circumstances.

Another great advantage possessed by acupressure is, that it demands no particular skill in manipulation, is done with great rapidity, and requires the aid of no assistant.

I am not to be numbered among those who believe that acupressure is to supersede the ligature as a hæmostatic agent, but I do believe that it is to be preferred in all cases where our aim is to procure primary adhesion in wounds made either by the surgeon's knife or by accident. In the foregoing paper I have considered the means employed by nature and art for suppressing hæmorrhage, and, by contrasting the different methods, have endeavored to make clear the advantages and faults which pertain to each.

In developing this plan I have, at the risk of tediousness, narrated cases, and given the pathological mechanism by which arteries are closed after the various methods.

If my effort shall awaken the attention of a single surgeon to the subject of acupressure, and prompt him to further investigation or trial, my aim is accomplished.—*New York Medical Journal.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—THE WOUNDS FROM GERMAN AND FRENCH ARMS.

The following facts are as important as they are interesting:

In a late journal we find an interesting communication from two surgeons, MM. Goujon and Felizet, on "The Effects produced by the Prussian arms." In this they state that, in every 100 gunshot wounds, they have always met with the mean number of 70 wounds from fragments of shells, and 30 from balls. In every 100 produced by fragments of shells, they have also constantly found 60 wounds in the back, or at the union of the shoulder and neck, and 40 wounds in front, or of the sides, or of the limbs. The fragments of shell removed have been of all weights, varying from 3 grammes to 500 grammes and more. Sometimes they penetrate directly, producing the most fearful lesions, while at others they only glance on the superficies, or pass under the skin around prominent parts, becoming arrested soon after their entry, or when somewhat deeper. When the bones are not crushed, these wounds usually heal readily; and in a hospital in which the patients remained for two months deprived of salt, condemned to eat horse flesh, rationed in their bread, deprived of brandy, quinine, etc., and abandoned to the most terrible moral depression, still very numerous recoveries after shell wounds were obtained. All circumstances being alike, these wounds are not more dangerous than those caused by ball.

The German bullets, larger than those of the chassepots, also differ from these in their form, being quite ovoid, more pointed on one side than the other, and having a transverse diameter larger by three millimetres. In the wounds they cause they follow a regular track, if they do not touch a hard object, the orifices of entrance and exit scarcely differing in extent. A great

number of these balls only penetrate to a slight distance, and are readily found under the skin, which they sometimes detach to a considerable extent without penetrating to deeper parts. Their size renders their extraction more easy, and they are more rarely changed in form than the chassepot bullets. The greater number of those wounded by them were struck in the legs, which is due to the Prussians not raising their guns to the shoulder, but only to the hip, when they fire. These wounds of the leg are usually but simple *setons*, which rapidly heal. The wouuds caused by the chassepots are in general much more serious, the orifice of entrance being very small, while that of exit is three or four times larger, indicating great laceration of the tissues that have been traversed. The bones fractured by them are reduced to a great number of fragments, so that twelve or even fifteen fragments may have to be extracted. They also penetrate much deeper into the tissues, and, their size being also smaller, they are extracted with more difficulty. They are almost always changed in form, and often split into fragments, which may be found separated from each other, or projected into the soft parts at great distances. The authors, from the observations they have made, conclude—1. The sword wounds (*a l'arme blanche*) inflicted by the Germans are neither frequent nor serious. 2. Their balls are infinitely less murderous than those of the chassepots. 3. It is by means of their shells that they have produced the greatest havoc. 4. This has depended less upon their mode of firing than upon the faulty positions which our men were made to assume. 5. All thing being alike, the wounds caused by shells are not more serious than those produced by other projectiles.—*Medical Times and Gazette.*

Art. II.—Rapid Cure of Buboes.

Dr. J. Grunfeld, assistant to Sigmund, of Vienna, has had much success in extracting the pus by means of a hypodermic needle, india-rubber tube, and syringe. Where the cavity fills

again, a second operation of the same kind should be undertaken; and when the pus is unhealthy, weak solutions, either of carbolic acid or chlorate of potash, should be injected, and pumped out again by the same syringe. Such patients as were so treated left the hospital much sooner than those whose buboes had been freely laid open.

Art. III.—Narrow Pelvis; Early Artificial Delivery.

Modes of performing this operation have of late been much improved, the douche being now-a-days the favorite method. Dr. Otto Speigelberg, of Breslau (*Archiv fur Gynæk.*, 1870), has undertaken to show, by statistics, that the results of the operation are less favorable than the consequences of waiting for natural delivery, even when the diameter is reduced below eight centimetres—i. e., a little less than three inches. The figures quoted and the arguments are very convincing, and they deserve the careful attention of accoucheurs.

Art. IV.—Eneuresis, and Its Treatment by a New Remedy. By John Barclay, M. D., late Assistant Professor of Materia Medica and Medical Jurisprudence in the University of Aberdeen.

Dr. Barclay terminates his valuable paper as follows:

The "specific" remedies in which most confidence is placed are—belladonna and its active principle atropia; bromide of potassium, alone and with syrup of poppies; cantharides; benzoic acid, where the urine is high-colored and of strong odor; zinc; camphor, and secale cornutum. Besides these, we have a host of others, as—lupulin; large doses of nitrate of potass; the inunction of morphia and veratria ointment into the perineum; the application of astringents, such as rhatany, tannin,

and iron, to the sphincter vesicæ, recommended by Oppolzer; drop doses of tincture of iodine every two hours, lately recommended by Dr. Schmidt, which, it seems, did good as long as the medicine was continued, but which, when omitted, left no permanent benefit; blisters to the sacrum; nitrate of silver to the prostatic urethra, and the same substance to the urethral orifice. I have tried several of the above remedies, and before I stumbled upon the syrup of the iodide of iron, found atropia or belladonna by far the most certain and trustworthy. Tincture of iron is much employed, but after frequent and persevering trials with it, I have been always disappointed. During the past two years and a half, twenty cases of incontinence of urine have been treated by me; the medicine invariably prescribed has been syrup of the iodide of iron alone, and so far as I know there has been no failure. I have notes of all the cases, but only eleven in a completed state, since the other nine, who came from a distance, did not return to say what was the result. The probability is that they were cured, otherwise they would not have been got rid of so easily. Uncured cases are those that return upon our hands. At all events, the eleven who did report themselves, or who were continually under observation, were all cured, the improvement in several of the cases following so closely on the administration of the remedy as to leave no doubt but that the good effect was due to the syrup. I may mention that Dr. Manson, of Banff, and Dr. Smith, of Kinnairdy, have both found the medicine equally satisfactory. Dr. Smith says that he tried it only a fortnight ago, in a boy who for a long time had been a sad martyr to both diurnal and nocturnal incontinence, and who had resisted all other remedies, but upon giving him the iodide, in two or three days he was all but well.

NOTE.—The cases are given in detail, and prove the great efficacy of the iodide of iron.—ED.

CLINICAL LECTURES.

"Ex principiis nascitur probabilitas: ex factis, vero veritas."

LESSONS FROM THE MEDICAL CLINIC AT THE "HOSPITAL DE LA CHARITE," given by S. JACCOUD, Assistant Professor to the Faculty of Medicine at Paris; Physician to the Hospital St. Louis; Chevalier of the Legion of Honor; Corresponding Member of the Royal Academy of Science of Lisbon, and of the Medical Societies of Berlin, Vienna, Wurzburg, etc. Containing twenty-nine wood-cuts and eleven chromo-lithographs. [Translated by Dr. J. D. JACKSON, of Danville, Ky.]

TWELFTH LECTURE—PROGRESSIVE MUSCULAR ATROPHY.

Exhibition of a Case of Progressive Muscular Atrophy—Mode of Development and Symptoms—Diagnosis and Emaciation—Semiology of the Claw-hand—Cause of its being Confounded with Muscular Ataxia—State of the Sensibility and Reflex Movements.

Electrical Exploration—Law of Duchenne—Exhaustion of Contractility—Certain other Modifications of Electric-Contractility.

Thermometric Exploration—New Facts—Constant Lowering of the Temperature and Paroxysmal Coldness—Pathogenetic Consequences.

Pains as Symptoms of Muscular Atrophy—The Active Form and the Torpid Common Form.

Gentlemen,—In No. 16, Saint Anne's ward, there lies a woman who presents us a very interesting example of progressive muscular atrophy. By its insidious progress and fatal gravity this malady merits in the highest degree the attention of the physician; judge for yourselves. An individual robust and vigorous presents himself to you; he appears to be in full health; he simply complains of becoming more quickly fatigued than customary, and of experiencing an unusual difficulty in the execution of certain movements. Examine now his hands, and if you observe that the muscles of the thenar and hypothenar eminences have undergone a marked diminution in volume; if you are assured this change cannot be attributed to a local influence, a traumatic one for example, or to some ante-

rior malady, you can affirm that you are in the presence of a mortal affection; that this individual, as well as he otherwise seems to be, is lost; that he must die; that he will die. What an end for so small a commencement. It is thus, however, gentlemen, that things come to pass. Feeble and contemptible in its beginning, mild but steady in its progress, muscular atrophy fatally destroys those whom it touches—the certain known cases of cure are so exceptional that we have not the right to interpose them in our prognosis.

This insidious character has not been defective in the case we have before our eyes, and the initial phases of the disease have been marked by one persistent phenomenon, to which there has not been accorded a sufficiently important place in the symptomatology of the malady. But we will take up things at their origin. A favorable accident has presented this woman to my observation from the first day of her illness; in the month of October, 1865, she entered my service in the Lourcine Hospital*, and I had had charge of her for seven months, when I caused her to be transported here, with the view of utilizing for you this interesting case.

Aged thirty-nine years, this woman was until now robust, and despite the fatigues of her work, she had never been sick. She is a mountebank, and it seems, indeed, that there is a very especial relation between this kind of work and muscular atrophy. The patient whom Professor Cruveilhier has rendered celebrated (named Leconte, which name is inseparable from the scientific history of the disease) was a mountebank, and since the relation of this instance many analagous instances have been published. On the 15th of August last (1865) this woman exhibited during the whole day before a booth where learned monkeys were shown, during all of which time the rain did not cease to fall (the temperature was far from being warm), and wet and soaked to the bone, this unfortunate one could not

* At this epoch the medical service of the hospital was not devoted to venereal diseases.

change her clothing until 2 o'clock in the morning. On the next day she was seized with chills, which were repeated during thirty-six or forty-eight hours, and immediately afterwards the pains appeared. Note well the fact they have endured up to this day. These pains, generally very lively, and always apyretic, have offered in their seat a double character; they have occupied the continuity of the limbs, following the track of the nervous cords and the joints, or rather the osseous extremities which form the articular surfaces. On a level with the articulations it was especially by pressure that the pains were developed, but in the intermediary segments in the muscular masses over the track of the nerves the pangs were spontaneous, and extremely painful; they increased on constricting the limbs, and they sometimes took on the form of irradiation—that is to say, that the pain did not occupy at one and the same time the whole length of the arm or the leg, for example; limited at first to the shoulder or the knee, it darted thence toward the elbow or toward the toes.

Despite her sufferings, which frequently deprived her of sleep, this woman kept up well until the month of September; she had the heart to go to the fete at St. Cloud to participate in the exercises; in effect she went, but the fete once over, she found herself much worse; the pains, which up to this time had only affected the right limb, extended themselves to the left side, and it was then that the patient came under my charge. It was at the commencement of October—that is to say, six weeks after the prolonged chilling, which, doubtless, is the exciting cause of the disease. During the first days, I had leisure to study the precise character of the pains of which this woman complains, and I could establish the perfect exactitude of the information she gave as to their seat, the mode of their irradiation, and their paroxysmal form. The acuteness of these painful phenomena astonished me a little when I considered the absence of fever, the preservation of appetite, and, in a word, the state of health of the patient; nevertheless, I admitted the existence of disseminated neuralgia, and a subacute form of

articular rheumatism developed under the influence of wet and cold, and I instituted the treatment after this diagnosis, when I discovered one morning a new phenomenon, which immediately modified my views. On the right side the extensors and the deltoid were the seat of fibrillary contractions, which were clearly visible beneath the integuments, and of which the patient was conscious; she peceived that certain parts of the arm were agitated by minute movements, which were not repressible. In such a case, such is the importance of this symptom that, without more hesitation, I declared that she was not affected by a rheumatism, but most probably by a commencing muscular atrophy, the commencement of which had been marked by sharp pains, contrary to the classical description of the disease. One or two weeks more having elapsed, and there was not the least room for doubt. To the fibrillary contractions there were joined muscular spasms, properly so called; the opponent movements of the thumbs, the opening and closing of the fingers, the elevation of the arm, had become difficult, and the relative integrity of the left limb permitted the affirmation, without fear of error, of a notable diminution in the fullness of the thenar eminence, the interosseous spaces, and the deltoidean region of the right side. Then, when the same electric current was applied to similar points on the left and right sides, it drew from this side a much less lively reaction, and the exhaustion was much more rapid than on the sound side. The difficulty of the movements was the direct result proportioned to the diminution of volume of certain muscular groups—to wit., the thenar muscles, the interosseous, and the deltoid; the enfeeblement and rapid exhaustion of electric contractility in the same muscles recognized the same cause; finally the muscles affected have the seat of their fibrillary contractions, spasms, and pains irradiating in the continuity of the members; the diagnosis was mathematically certain. Since then we have attended day by day the progress of this essentially invading malady; we have seen the successive degradation of divers muscular groups, and the correlative powerlessness of function, and

I will add that the accidents have marched with an exceptional rapidity; indeed, the debut of the disease ought to be fixed at the 15th of August last, she is then in the ninth month, and already this unfortunate woman is completely infirm.

The complex elements, which observation to-day marks as exciting in her case, can be placed under three chief heads: They are deformities, vicious attitudes, and troubles of motility.

In a general way the deformities consist in the effacement of the normal muscular projections. A glance at the superior and inferior limbs is sufficient to establish the truly shocking slenderness; but a more attentive examination soon shows that this diminution of volume is not uniform; upon certain points the deformity does not exist, the parts have preserved their natural aspect; by the side of these points there are others where the unaided eye cannot acquire the notion of the presence of muscles beneath the integuments, it is necessary that palpation should be brought in to aid the demonstration. The deformity is the same for the two sides upon which it is seated, that is to say, that it occupies perfectly similar points, but it is more marked over the right than the left side; you will not forget that the accidents had their origin on the right side. The defect of regularity, or rather of uniformity in these changes of the exterior form of the body is of great importance in diagnosis; this is a character absolutely incompatible with a simple emaciation, and in eliminating this cause of error, the clinical comprehension of the subject is greatly facilitated. Here besides, if even the members and the trunk were uniformly attenuated, we would have for our guide two other circumstances equally significant; the visage of this woman is not thin, it presents not a wrinkle, or a line attributable to a sinking of any group of muscles; on the contrary, it is remarkable by an expression of perfect health which painfully contrasts with the aspect of the other parts. The second circumstance, which can also direct us, is the spontaneity of the accidents, that is, the absence of every anterior malady to which the thinness can be attributed. Thus the want of uniformity in the atrophy of the muscular masses, the preser-

vation of the normal aspect of the face, the absence of anterior disease, you will observe, are the three phenomena which distinguish simple emaciation from progressive muscular atrophy. Note besides this, that when disease seizes fat individuals it does not cause the fatty tissue to disappear, so that the sub-cutaneous layers which one can appreciate on lifting them up between the fingers contrast very strangely with the small volume of the muscles and their functional insufficiency.

The deformity not being regular, it indicates precisely the points which it occupies, nothing is simpler. On the hand the first interosseous space is completely flattened; take this fold between the thumb and index finger, your two fingers are scarcely separated by a thin layer of tissue, which represents the remains of the first dorsal interosseous muscles, and the adductor of the thumb or first palmar interosseous. The salient thenars and hypothenars are thinned, but the modification which is most striking is that which results from the almost complete absence of the fullness posteriorly of the forearm and arm; all the group of extensors of the wrist and the hand on the one part, and of the forearm on the other, are profoundly affected. Turn and go over it again, we will find still other deformities; in place of a rounded projection the shoulder presents a flat shape, into which you can introduce the hand up to beneath the acromio-coracoidien arch; the flattening of the muscles supra and sub-spinous is not less marked, the deformity exists as in the right cervico-dorsal region, and in the anterior thoracic region of the same side.

In the abdominal parts the distribution of disorders is scarcely the same, in the buttock it is the antero-internal region, which is the most wasted, it is then likewise here that the group of extensors and adductors which most suffered; in the leg the deformity is more general, while there is wasting of the posterior region there can be demonstrated in front a manifest depression, and there indeed one can sink the hand deeply in the anterior tibio-peroneal space without being stopped by muscular resistance; only the external prominence produced by the preoneals

has preserved its ordinary proportions; on the foot the interosseous spaces show themselves in hollows, finally the region of the buttock on the right side is perceptibly more flattened than the left.

You can easily conceive, gentlemen, that the deformities of atrophy thus disseminated ought consequently to break the muscular equilibrium, and to determine vicious attitudes due to defective action of the diseased muscles, and the predominance of the muscles remaining intact. The second group of symptoms is very clear in our patient, the attitude of the superior members in repose is truly characteristic. The forearm lies on the level of the bed in a position intermediate between pronation and supination, but inasmuch as a voluntary impulse does not extend it, it remains more than demi-flexed upon the arm; this stationary result is the necessary effect of the relative integrity of the anterior muscles—that is to say, the flexors. But it is in the hands that the rupture of equilibrium between the contractile agents has produced the most marked effects. The wrist is slightly flexed on the forearm, and the fingers are curved toward the palm of the hand; the flexion is not carried to the point of contact of the digital extremities with the palm of the hand, but it is very prominent; it exists likewise in the metacarpo-phalangeal articulations, and in those of the phalanges with one another, that which is shown you is due to the defective action of the interosseous muscles, and the action preserved in the superficial and deep flexors. The phalanges of the thumb are also in a state of demi-flexion, and its approximation to the median axis of the hand denotes the relative powerlessness of the dorsal extensor, and the preponderance of the adductor muscle. By a voluntary effort the patient can straighten his fingers and his forearm, from which you can conclude that there is not a suspension of motor innervation, or paralysis properly called, in the extensors, and that the vicious attitude results simply from the diminution of their volume and the parallel enfeeblement of their static and organic action. On the other side, if you seek to straighten yourself the diverse

segments of the member you will easily bring them into straight extension without experiencing resistance, and without provoking any pain; this observation is one of importance, it proves of itself that the abnormal flexion of the fingers and the forearm results from the relative powerlessness of the interosseous and extensor muscles, and not from the contraction of the flexors.

Left to themselves, in repose, the hands and flexed wrist of the patient present one of the types of what is called the claw-hand *main en griffe*. I think it useful to fix your attention for a moment upon this point of semiology, and to indicate to you the intrinsically differential characteristics of the principal varieties of this deformity. In the disease known under the name of contracture of the extremities or tetanus, the claw-shape resulting from a flexion of the fingers is much more pronounced; the thumb in adduction and complete flexion occupies the palm of the hand, and the four fingers are curved beneath; besides, the patient cannot straighten the fingers, his efforts made to do so are painful, and the artificial straightening of their curvatures always difficult, is sometimes impossible, provoking marked pain. Finally, this flexion by spasmodic contraction of the flexors is not continuous, it does not always remain of the same degree—a thing which is peculiar to the paroxysmal march of the malady.

In the form of chronic rheumatism, which bears the name of nodal or deforming arthritis, there are to be observed many types of permanently vicious attitudes of the hands. To the number of these types, so well described by my learned colleague M. Charcot, the most common is that of the flexion, which produces a true claw-hand. Here also the straightening of the crookedness is difficult or impossible, and always painful; but the deformity results simply from osseous or articular lesions and the fibrous contractions, which have modified the normal relations of the parts, and brought about a sub-luxation or a luxation of the phalanges, the one upon the other, and the metacarpal bones. The analogy, you see, is declared in the simi-

larity of position; it is sufficient to explore the parts and establish the articular swellings, the osseous stalactites and fibrous bridles, which reveal the nature of the malady and the cause of the deformity.

Following old paralyses, the anatomical modifications of which (the muscles are the seat) often bring about contraction, and as these secondary disorders especially occupy the flexors, one sees the hand gradually assume the characteristic *main en griffe*. But this flexion, always increasing, is sometimes carried to the point that it is necessary to interpose a foreign body between the fingers and the palm of the hand, in order that the patient's nails may not enter the flesh; complete straightening is impossible; when the hand, after having being slightly straightened, has been let go, it soon falls back into its vicious position, by reason of the elastic retraction of tissues, the maximum of whose extensibility has been attained; the patient has no power over this deformity, and since it ordinarily succeeds to a hemiplegia, is unilateral.

This much said, I return to the vicious attitudes of our patient. When she is made to sit up in her bed the trunk is then flexed on the pelvis, but this flexion is not directly anterior, it takes place obliquely in such a manner that the anterior surface of the body, while it looks to the front, at the same time looks to the left, a difference you will easily comprehend when you reflect that the sacro-lumbar mass is atrophied on the right side; consequently those muscles offering a less resistance to the antagonistic action of the flexors, and the flexion more pronounced on the right side, is necessarily accompanied by a movement of rotation which turns slightly to the left the anterior face of the trunk. By an effort of the will the patient can prevent this abnormal flexion, but this effort cannot be prolonged without extreme fatigue.

From the preceding observations you can easily deduce the conclusions as to what are the troubles of motility; it is to the right side that the indications I am about to present to you relate; you will only recall the fact once for all, that the same

phenomena exist upon the left side, though in a more attenuated degree.

The hand being extended straight, the fingers touching each other, the patient finds it difficult to separate them, though finally does so; but she is far from attaining their normal separation; likewise, if the fingers have been artificially separated, their approximation is difficult, and less perfect than natural; the interrosseous muscles are then partially atrophied, and the waste is greater in the dorsal interrosseous than in the palmar. Among the proper movements of the thumb, it is the adduction and flexion which are the best preserved, the atrophy then weighs principally upon the short and long abductor and the opponent; the same is the condition of the hypothenar muscles, the short flexor acts infinitely better than the two others.

In the forearm the movements of flexion are pretty nearly normal; however, they are less energetic on the right side than on the left; the extension of the wrist upon the forearm, and of the latter upon the arm, is limited, slow, and difficult; in effect it is the extensors and the triceps which are the most profoundly affected. I have said to you that the flattening of the deltoidean region indicates atrophy of the deltoid; indeed, the movements of elevation and abduction which appertain to this muscle are far from presenting the amplitude and force of the normal state; however, it is sufficient to permit the manifestation of the pathognomonic sign of atrophy from its great indentation. At the moment when the patient, to the limit of her power, extends the arm from the trunk, carrying it a little in front, the shoulder-blade seesaws upon its antero-posterior axis, so that its superior external angle is lowered, the inferior shifting its position, and approaching the median line, and the internal border, far from resting in contact with the costal wall, detaches itself like a wing. There is thus formed a deep gutter, oblique from above and without, into which one can easily introduce the fingers, covered by the skin. This guttering is here the more marked, in that the scapular portion of the trapezius and rhomboideus are atrophied, as is proven in the slight

extent of movement, which suffices to efface the shoulders in approximating the shoulder-blades, the one toward the other. In the dorsal decubitus, and in the sitting position, the movements of the abdominal muscles are all possible, but they are far from presenting the same energy and amplitude; the abduction of the thighs and their flexion upon the pelvis are nearly normal; extension of the leg upon the thigh can be effected, but it is difficult, especially upon the right side, and neither upon the right nor left side can it be maintained beyond one or two seconds; the triceps is then gradually compromised; the flexion of the leg is very satisfactory, but that of the foot is incomplete, so that the movement of extension is accomplished by the gastrocnemius.

An examination of the abdominal movements reveals one interesting peculiarity, which might at first sight trouble us, and cause a hesitation in diagnosis. When the patient is in the dorsal decubitus you command her to elevate her right limb above the level of the bed, you see the movement commence with unusual slowness; then when the popliteal region commences to be elevated, the entire member is suddenly projected outwards; the same phenomenon exists in a less marked degree on the left side, and this involuntary eccentric projection which comes in to traverse the voluntary movement, and change the normal direction which has been willed, simulates another disorder of motility, to wit, muscular ataxia. But this anology is entirely superficial, this projection results simply from atrophy of the anterior and internal muscles, and from the integrity of the vastus externus, the tensor vaginæ femoris, and the lateral peroneals; the harmonious equilibrum of the powerful elevators, being thus broken by the inertia of certain ones of them, the elevation can no longer be directed, and the member, whilst it is elevated, is carried in the direction of the proponderating powers. This eccentric projection, then, is a mechanical fact completely different from the disorder of innervation, which has as a result, the symptom known under the name of muscular ataxy. Somewhat roughly I have endeavored to point out to you this cause of error which has not

been indicated. It is sufficient on such an occurrence, to establish the relative volume of the antero-internal and external muscles, to seize the true signification of the involuntary projection.

It is in the upright position that the effects of the atrophy of the abdominal muscles appear in their full force; the patient can sustain herself upon her limbs, she can walk, but it is by alternately gliding one foot before the other, rather than by elevating them; on the other hand, the unilateral atrophy of the lumbar muscles and those belonging to the buttocks of the right side, result in a singular oscillation of the trunk from one side to the other. When the woman is erect for some instants, her body inclines towards the left, then an energetic contraction of the muscles of the right side following, the trunk is brought from this side, passing beyond the median line; this balancing movement ceases when the patient rests on the right axilla, and this circumstance demonstrates the justness of the preceding explanation.

I must ask you, gentlemen, to bear with the dryness of these details, but they are indispensable; it is only by this circumstantial analysis that an actual case can serve you in the conception of analogous facts; it is only by this precise and complete explanation that you can protect yourself from the causes of error which this malady presents either in its initial period, when there are only certain isolated movements restrained, or in its slow period, when it has brought about a state of infirmity by the progressive degradation of the muscles of locomotion.

In our patient the sensibility is intact in all its modes of manifestations, but is not always thus. Heretofore M. Duchenne has indicated an æsthesia in numerous possible symptoms from muscular atrophy; since then my learned firend Benedikt has likewise observed it;* this fact is not without importance, since it contributes toward the establishment of an often controverted proposition, to wit, that the seat of the malady is in the nervous

* Benedikt, Einige Beobachtungen uber progressive Muskelatrophia (Wien, Medix. Hale, 1863). Die Resultate des electrischen Untersuchung and Behandlung. Seperatabdruck, Wien, 1865.

system, and not in the muscles themselves. The same is the case for another phenomenon, which Remak and Benedikt have brought to light, and which I have in vain looked for in many searches for it in our patient; this is the exaggeration of reflex movements, principally on a level with the muscles which present fibrillary contractions and spasms.

In every malady of the nervous and muscular system, the clinical examination is not completed until the electrical explorations have been methodically accomplished; this obligation, which is general, is never more imperative than in progressed atrophy of the muscles; in the beginning, and in doubtful cases, it is by it, and it alone, that the question can be judged, and in certain cases it brings to the diagnosis a complement of proof which cannot be neglected. The principles of this appreciation are of the clearest. A current properly applied to a muscle produces in it a sudden and energetic contraction; this movement is very strong when fully effected in the case of the muscle examined. In atrophy the electric reaction of the muscle diminishes in proportion as the contractile fibre disappears, the movement is still well produced, but fuller, the fullness goes on increasing in direct proportion to the disappearance of the muscular fibre; later the contraction is ineffectual, it is insufficient to displace in any degree the bony lever which the muscle ought to move. We may even conceive the possibility of a total absence of contraction if the muscle is completely destroyed, but for my part I have never observed it, and I am in accord with the celebrated physiologist, Schiff, (of Florence), to whom I have had the honor of showing our patient, and who has never established this phenomenon. In the first phases of the malady, when the enfeeblement of the contractility is slighily marked, it is by means of a comparative appreciation that you can judge exactly of the situation. At this time the muscles are affected only in small number, and exploring successively with the same current the divers muscular fascia, you easily seize the differences which they present in the energy and utility of their contraction. When the atrophy predominates on one side, as in our woman,

the reuslts of this comparative examination are peremptory, for the intensity of the current remaining the same, you see certain muscles of the side most affected contract with much less force than their homologues on the opposite side. The exploration which I have practiced before you repeatedly is another verification of the propositions formulated by M. Duchenne in his first works upon this subject; electric contractility exists everywhere but it is feeble in the muscles affected, and the degree of this enfeeblement is perfectly proportioned to the atrophy revealed by the abnormal depressions and the troubles of motility.

I will not insist upon this further, I will only add a word as to the sacro-lumbar muscles; I have pointed out to you the atrophy of the muscular mass of the right side, now this lesion, regarding which a simple inspection might leave us in doubt, is clearly demonstrated by electricity; the minimum current and the mean current of our apparatus of induction are, without apparent effect, set upon the right lumbar mucles, to bring out their contractility, it is necessary to resort to the maximum current; now these same currents, which are ineffectual on the right, produce on the left side an instantaneous and energetic reaction.

The enfeeblment of the muscular contractility proportioned to the failure of the fibre is not the sole phenomenon which electric exploration reveals in progressive muscular atrophy, and in this respect there is an hiatus left us in the classical descriptions. Among other modifications I ought to direct you to the abnormal rapidity of the muscular exhaustion; in muscles already atrophied, but which still contract with a certain energy in the sound muscles about becoming affected, the contractility diminishes very promptly under the influence of strong currents, either constant or induced; this property can also be exhausted momentarily after some shocks, and the muscle remain inert under excitation, repose returning with its first activity. This phenomenon is very frequent, you have been able to see it in our patient, you will not forget then that this is a new character to add to the symptomatology of muscular atrophy. Still other

modifications of electric excitability have been recently pointed out by Benedikt.* I have been unable to establish them in our patient, but the name of this eminent observer is a sure guarantee of the exactitude of the facts which he has viewed; furthermore, these modifications are more delicate than the preceding; they can only be brought to light by a daily exploration, and it is necessary furthermore, that the atrophy should not be too advanced, or too generalized; you will see by this that we are not under conditions favorable to the observation of these disorders. These are they: The muscles yet sound, but which will be a little later affected by atrophy, frequently present, (not always), a considerable diminution of their electric contractility before every other symptom; in which case—note the fact well—the phenomenon is not, nor ought it to be, in connection with the quantitative diminution of the muscular fibre, but rather to a primordial trouble of innervation.

There is a like conclusion in presence of this other phenomenon which I have been able repeatedly to shew you in our woman; the Faradaic excitement of certain groups of muscles manifestly atrophied, determine positive contractions in their antagonists, it is especially in the abdominal members that this symptom is well marked. A third phenomenon finally demonstrates more categorcially than the preceding the existence of a primitive disorder of innervation, this is more or less evident in the excitability of the inter-nervous trunks, the muscles of which are as yet only slightly affected. The knowledge of this important fact is due to Benedikt; but for preventing all error, I will add that it is not constant, and up to now has only been observed with the galvanic current.

It has been known for a long time that in progressive muscular atrophy the temperature of the parts atrophied falls below normal; the fact is true, but thus formulated, it loses all precise signification. Remark, indeed, that this coldness may appertain to two very different conditions; the quantity of mate-

* Benedikt, loc. cit.

rial being diminished in the atrophied members the nutritive change is evidently less, and the fall of the temperature is the direct expression of this relative insufficiency of nutrition; but all reserve made for the action of this cause, which is constant, the coldness may be the result of vascular innervation. Now, in a pathogenetic point of view, it is very important to be clear upon this, for if this last alternative is proven, this sole fact suffices to prove that the malady has its seat in the nervous system. This question has not been solved to the present; I wish to say that one is bound to note the full temperature, and that he need not pre-occupy himself with seeking the cause and the sense of this symptom. The numerous explorations which I have made upon our patient permit me, with respect, to this point, to solve the question. In the two upper limbs the temperature is constantly below normal; the highest number which has been observed on the left side, the side least affected, is 36° 8 (Cent.), and generally we have only had 36° 7 to 36° on the right. Observe a fact which is constant; nothing authorizes us in attributing it to the influence of the vascular nervous system, this is the expression pure and simple of a material failure of the parts; there is less tissue, therefore less nutritive change, therefore less warmth. But, gentlemen, besides this constant element, we find an element eminently changeable, so that its variability we are obliged to lay to the nervous system. Yes, the coldness is constant, but the degree is variable, and I cannot better render you an account of these phenomena than in telling you that there are true accessions of cold. The patient is conscious she experiences a painful sensation of cold; she complains (I repeat to you her expression) of having her right leg and arm frozen, whilst the left limbs preserve their warmth. The hand applied to the two sides, for comparison, demonstrates the justness of these subjective sensations, and the thermometer gives the measure of this paroxysmal cold. The patient only deceives herself upon one point; in these cold periods the left side also grows cold, whatever she may say, but the lowering of the temperature being much more marked on

the right, the sensation of cold is perceived as unilateral. Here are the precise numbers. The ordinary temperature is 36° 7 to 36° 9 on the left, and from 36° to 36° 2 on the right. During the access of cold it falls to 36° on the left side, and it falls to 31° on the right; the thermometers have always been left in place at the same time, twenty minutes at least; I have been careful to alternate the instruments—that is to say, to place on the right that which in the preceding exploration had been placed on the left side; it has been in the hand closely shut that the thermometers have been placed, and during the whole time of the experiment a person in the service has stood by the patient to prevent displacement and guard against fraud. At first it was in the morning that the paroxysms of cold came on; later it was in the afternoon that they were most marked; finally the enormous difference of 5° in the temperature of the two sides during the access only persisted two or three weeks, this was in the fourth month of the disease; after this there were not more than 4° of difference, and for about a month we only found 3° to 3° and a fraction. Thus the day before yesterday evening a new exploration, which I had made with the assistance of M. Briceteau, our chief of clinic, gave us 36° 2 on the left, and 33° on the right; this is a difference of 3° 2. These accessions of cold have never come on more than once in 24 hours, but they have varied in duration from two hours to four and a half and five hours. The patient indicates herself very precisely the end of the paroxysm. "I am no longer cold on the right side," she says. Indeed, the thermometer then shows but a difference of some tenths between the two sides, which, as I have said to you, is constant. To resume, the upper atrophied members always maintain themselves beneath the normal temperature, and this constant effect can be legitimately attributed to the material diminution of the tissues; but the accessions of cold, during which the temperature fell from 1° on the left, and from 3 to 5° on the right, to return after some hours to its primitive level, constitute a mobile element, which cannot be imputed to anything else than vascular con-

tractions, to a paroxysmal ischemia—that is to say, to a momentary excitement of the vascular sympathetic nerves—a conclusion of moment, which demonstrates by itself alone, as I told you just now, the role of the nervous system in progressive muscular atrophy.

Such is the history of our patient; the new facts which I have pointed out to you are, I hope, a sufficient excuse for the length of the details upon which I have entered. The seat and the method of progressive atrophy have been conformable to the classical type; it has commenced on the right side, which is the one which predominates; it is what is seen seven times out of eleven; the muscles have been invaded from the extremities toward the trunk, this is the ordinary march; but that which has been particularly unusual, is the rapidity of the invasion, and especially the beginning by painful phenomena, articular pains, and pains in the continuity of the muscles, which have persisted during many months. In the masterly description which he has given of this disease, M. Duchenne does not indicate this special mode of origin so liable to lead us into error, nor have any of the observers who have followed him marked it out. Our fact then is far from the common type, but it is not the first example of that kind. Remak and Benedikt * have seen atrophy originate thus; Moritz Meyer marked dorsal pain, and that of the members;† Roberts and Friedbery have likewise noted it in many observations;‡ Remak has insisted particularly upon the osseous pains. I have seen in a physician pains of the neuralgic form progress coincidently with muscular lesion; the first time my honorable confrere came to consult me he complained solely of neuralgia, but already the aspect of the thenar

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* Remak, Uber die Heilbarkeit der progressiven Muskelatrophie (Oesterreisch Leitschr fur pakt, Heilkunde, viii., 1862). Benedikt, loc. cit.

† M. Meyer. Die Electricital, etc. Berlin, 1861.

‡ Friedberg, Pathologia und Therapie der Muskellahumung. Leipsig, 1862. W. Roberts, An Essay on Wasting Palsy. London, 1858.

eminence and the interosseous spaces revealed the true signification of these pains, and later the atrophy of the deltoid, and the gastrocnemius left no doubt of the progressive character of this lesion. The pains had then ceased.

If we take into account all these facts, excluding what we have under our eyes, you will see its exceptional appearance; as on the one side the pains are far from being constant, as the rapidity of the atrophy is always greater when the pains exist, and that there is a constant relationship between these two characteristics, the rapid progress and the painful phenomena. I am inclined to queston the cases analogous to ours, and to oppose this active form of the malady to the torpid form or the common one, which alone up to this time has served as the basis for the didactic descriptions. You will seize clearly the occasion and the causes for this distinction when we have studied the state of the nervous system in progressive muscular atrophy. This will be the object of our next meeting.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

LOUISVILLE OBSTETRICAL SOCIETY. Regular Meeting February 18, 1871. [Reported by W. DOUGLAS MORTON, M. D., Secretary.]

Dr. Hornor read a paper, of which the following is an abstract on

PROLAPSUS FUNIS

The paper had been suggested by a case of this *complication* recently ocurring in his practice. When he first saw the patient she had been in labor some ten hours. The parturition antedated the expected time about eight days, and was suspected to have been precipitated by efforts made in lifting heavy tubs of

water; she had been engaged in washing clothes on the morning of the day of her confinement, the delivery taking place at midnight. On examination the vagina was found filled by an elongated bag of waters, and it was thought that something like a loop of the cord could be felt enclosed. The os was completely dilated. In endeavoring to ascertain the *position*, the membranes were unintentionally ruptured, and the waters escaped, leaving a *pulseless* loop of the cord five inches long hanging in the vagina. The head was lying in the first position closely engaged in the superior strait compressing the prolapsed cord, the pains frequent and strong, labor terminating in twenty minutes after the rupture of the membranes. There was no apparent deformity of the pelvis. The child was still-born, appeared to be well developed, aud gave no decided evidences of death having occurred a long time previously. The mother stated that she thought she felt motion the day before, or about thirty-six hours prior to delivery. The various methods of resuscitation were persistently employed for half an hour without effect, although not a sign of life was present to encourage their application. The doctor candidly invited criticism of his management of the case, believing that, acting deliberately as he did in the premises, none of the artificial measures recommended in such instances were capable of supplementing Nature's process under the circumstances, her promises to perform her work with celerity was faithfully fulfilled, as shown by the result. If he had any regret it was at being caught without his forceps, for had they been at hand he would perhaps have been tempted to use them to hasten delivery, acting upon the presumption that the child might possibly be saved, notwithstanding the grave doubts entertained in that respect.

The subjects of statistics, etiology, diagnosis, prognosis, and treatment were successively considered at length. The various authorities gave about 25 per cent. as the average of the occurrence of prolapsus funis in a given number of cases, its relative frequency seeming to increase according as the presentation deviates from the normal one.

As *causes*, were mentioned a too great length of cord, large quantity of liquor amnii, malformation of the pelvis, abnormal position of the fœtus, implantation of the placenta at a point near the uterine orifice, insertion of the funis at a point near the lower margin of the placenta, a very relaxed and dilatable os uteri, and a want of tonicity in this part of the organ associated with absence of sensation during uterine contraction, and irregular contraction of the uterus, whereby the lower segment of the organ becomes unduly relaxed. The validity of the explanation of prolapsus, which refers it to a disproportionately large pelvis or small head, was not admitted; if such were the case the accident would be met with far more frequently during premature labors.

As regards *diagnosis*, the question of greatest importance is to ascertain if the child be living or dead; absence of pulsation at the time is not a sufficient sign of death; uterine contraction may suspend the pulsation for the time being, and be followed in its recurrence during the intervals between the pains; this arrest of the circulation has been known to last for a quarter of an hour without compromising the life of the child.

Under the head of *prognosis* the mortality attending prolapsus of the cord was given as being one-half and upwards; compression of the cord being the chief, if not the only, cause of death. In this connection some interesting speculations were indulged in as tending to show the probable length of time the child could possibly survive an interruption of the fœto-placental circulation. Certain animals of the reptile and other classes were cited as affording some analogy, as regards conditions to the fœtus in utero.

On the question of *treatment* Dr. H., after alluding to version and the forceps as means for hastening delivery, dwelled for some time upon the *postural method*, pointed out the kind of cases in which it was applicable, as well as those in which a resort to it was injudicious, because of the loss of valuable moments that should be employed in speedily terminating labor, and concluded that he believed the method would share the

fate of most new discoveries in therapeutics, which were wooed on account of their novelty and wedded without a correct appreciation of their merits.

Dr. T. Anderson would not have used the forceps in this case without a certain knowledge that the child was alive at the time. He thought the use of forceps was, in every case, attended with more or less risk to the mother, and that we are not justifiable in subjecting her to even the slightest risk upon such an uncertainty.

Dr. Newman deemed it very important in every case of labor to ascertain, by auscultatation, first of all, whether a living or dead child is to be dealt with. He regretted that in this case auscultation had not been employed. He thought that in answering the question proposed by Dr. Hornor, we must proceed upon the idea that the pulsations in the cord ceased at the time the membranes ruptured, and not before; not only for the reasons that the pressure which then occurred was sufficient, and that there was no other cause discovered, but for the reason also that Dr. Hornor, who alone observed all the circumstances in the case, expresses that belief himself. Under such circumstances he would not leave the case to Nature, even could it have been known that she would have accomplished the delivery of the child in twenty minutes. He would resort, in such cases, first, to the "postural method," as practiced by Dr. Thomas, or secondly, to the forceps, or thirdly, not having those at hand, the pains not being very strong and frequent, he would deliver by turning, by either of which last methods the delivery could be effected in less than twenty minutes. The skillful use of the forceps in such a case as this would be attended with no danger, and version with very slight risk.

Dr. Bailey—In prolapsed funis the danger is from interruption of circulation through the cord by pressure, and good management is to secure the restoration of it, or to deliver in such manner as will cause pressure for shortest time.

Management is to be regarded in view of average length of time of delivery, and not the actual time in which the case was

delivered, as he could not possibly know that nature would effect delivery in twenty minutes. He did not auscultate the abdomen nor discover the prolapsed funis till after the rupture of the membranes in making examination. So I am bound to conclude that the child was then living.

He should have endeavored to restore the circulation by the postural method of Prof. Thomas,* and failing in this he should have delivered by the aid of forceps, or delivered by turning. Either of which methods promised more safety to the child than leaving it to nature. The increased danger to the mother would have been justified by the enhanced prospects of the child.

His conduct of the case was proper if he had satisfied himself of the death of the child, but this conclusion is not supported by the evidence he adduced.

Dr. Wilson simply desired to add his testimony to that of the gentlemen who preceded him as to the importance in such cases of ascertaining by auscultation of the fœtal sounds, not only the position and presentation of the child, but also its condition. Then if at any time during a tedious labor the fœtal heart-sounds previously heard full and strong, should become weak and feeble, the indication would be to extract the child as quickly as possible, consistent with the mother's safety. The importance of this had been very forcibly impressed upon his mind by a case which he had attended several years ago in Charity Hospital, New York. The woman was taken with labor pains in the evening, the fœtal sounds being heard very distinctly. The first stage being very tedious he went to his room, giving directions to be called when the waters came away. The next morning he found the os fully dilated, membranes very tough, but neglected to auscult. After two or three hours the membranes were ruptured and the child was still-born. The labor might have been terminated several hours sooner had there been any suspicion that the condition of the child demanded it. Since

* It is placing Dr. Thomas in an unpleasant position before the medical public to term the postural treatment as his own. Deventer practiced it in 1701; Mowbray in 1724; Bracken in 1737, and Ritgen in 1848.—Ed.

that time he has been in the habit of ausculting very frequently during the progress of the labor.

Dr. Forrester, under the circumstances, did not believe the labor could have been hastened by version or the forceps, to the benefit of the child. Does not, however, believe that the opportunity for deriving advantage from version had passed because the membranes had been ruptured, and the waters, or more probably only a part of them, had escaped, for the most favorable time for version is immediately after rupture. Both version and delivery by forceps would have required too much time to be of service.

Does think, however, that Dr. Hornor should have tried to reduce the prolapsed cord by the postural method of treatment as recommended by Dr. Thomas, in spite of the fact that the expulsive efforts were active and forcible. During the intervals of the pains it is probable that the presenting head would have been drawn out of superior strait sufficiently, when the woman was placed on her breast and knees, especially as the escape of a part or all of the waters had left additional space in the abdominal as well as uterine cavity. Had a tendency to reprolapse shown itself, this could have been prevented by pressing moderately through the abdominal walls upon the fundus of the uterus, this causing the presenting part to completely fill the os uteri until forced into the excavation. He could not agree with Dr. Hornor that when the small loop of cord has once left uterine cavity it can not be returned into it, because there is no longer room for it. We all know how frequently the whole head and a great part of the forearm are introduced into the uterus. Are not they many times larger than the prolapsed loop?

It seemed to him that in some cases advantage might be gained by making a *posterior* inclined plane, by elevating the hips, the woman remaining on her back.

GLEANINGS FROM THE RECENT TRANSACTIONS OF THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Prevailing Diseases.—Committee is not aware of any disease

prevailing in an epidemic form since last meeting. Dr. Thruston reported the prevalence of ophthalmia neonatorum in his practice. These cases were treated and promptly arrested by him, by the use of cupri. sulph. Dr. Thruston made use of the copper crystal as a stick, washing the eye before and after the operation with luke warm water by means of a syringe. Other members had derived benefit from use of argt. nitrat gr. j. aq. ℥., first washing away the secretion. The use of warm milk, as a palliative, was recommended. True pus in the atmosphere, in wards where the disease was epidemic, was alluded to. The assertion which had been made by some oculists that the disease was the result of specific disease in the parents in all cases was generally discarded by the members.

Skin Diseases.—Dr. Octerlony reported a case of rupa simplex non-syphilitic. Two months subsequent to the eruption, patient was seized with tertian ague, upon the occurrence of which the whole lower extremities occupied before by the eruption became the seat of erysipelas. A solution of benzoic acid gr. x., vel. xx., ad. aqua. Oss., was recommended to relieve the itching of certain skin diseases, especially useful in chronic urticaria. In a case of secondary syphilis presented by Dr. Brandeis—the primary disease was treated by hypodermic injection of corrosive sublimate. The suffering sustained by the patient after these injections was intense, the disfiguration following the operation was great and permanent, and the security against secondary symptoms nothing. Dr. Octerlony treated eczema with ungt. plumbi iodidi, sometimes adding a little chloroform to relieve itching; cases recently under this treatment were chronic cases and attended with induration.

In a case of measles, during the eruptive stage, a slight cooing sound suddenly became audible over the heart, the sound was systolic, and has existed in the patient ever since. It could not have existed before, as a daily examination of chest was made to detect pulmonary symptoms from the commencement of the disease. Dr. Octerlony thought measles should be enumerated among the causes of endocarditis.

Surgery.—An aneurism of the popliteal artery had caused such destruction of the surrounding bony structures as to render amputation necessary. The tumour, which was the size of a large orange, was situated between the artery and head of the tibia, the popliteal over-riding the tumour. The knee was greatly swollen and discolored; an external opening also existed in the soft parts. The patient was emaciated almost to the last degree—amputation was performed in the middle third of the thigh, and from this time the the patient gained in health and flesh to an extent quite incredible.

Pathology.—Dr. Gaillard alluded to the fact that two years ago a rare case occurred in the practice of Dr. Brandeis, of this city, in which a perfect cast of the bladder was removed, the specimen being now in the museum of one of the colleges of this city. The cast was fibrous in structure and thickly studded with triple-phosphates. Dr. Gaillard had recently noticed the report of another similar case, the specimen being now in the British Medical Museum. The patient thus afflicted fell, receiving a blow upon the spine; retention of urine followed, and this was relieved by the catheter for several days, after which in an attempt to again introduce the catheter, the instrument met with some obstruction in the bladder, and the patient could not be relieved; he died, and a *post mortem* examination revealed a cast of the mucous coat which was fibrous in structure and flocculent on one side.

Dr. Gaillard verbally reported a case of empyema which he had been asked by Dr. Holloway to examine. The patient (male) was about forty-five years of age; an Irishman. He had been treated by several physicians for phthisis pulmonalis. Dr. Holloway had detected when the patient passed into his hands hydrothorax, and the patient had been relieved by the usual operation for paracentesis.* Several weeks after this operation he was closely examined by Dr. Holloway and himself. The

* This occurred early in January, 1871, the amount of serous fluid removed being eleven quarts.—Ed.

left portion of the thorax presented almost the barrel shape of pulmonary emphysema. There was bulging of the intercostal spaces; the apex-beat of the heart was very near a line dropped vertically from the right nipple. The pulse was frequent (about 100 to the minute), small, intermittent, and irregular. There was a tumor-shaped projection over the epigastrium, and this whole mass vibrated at each systole of the heart. This pulsation was evident to the eye, and communicated a marked impulse to the hand under palpation. It was a sensitive, pulsatile tumor, below the line of the diaphragm; but under auscultation no bruit was detected. Deprivation of food and drink, with free purgation, produced no change in the appearance or behavior of this tumor. There was entire flatness over the whole lower lobe of the left lung, and over this region there was no vesicular murmur, and very slight tubular respiration. Over the upper lobe of the left lung there was marked dullness, no vesicular murmur, with the tubular respiration much impaired. Over the entire right half of the thorax there was puerile respiration. The number of respirations was about thirty to the minute. The patient was cachectic, depressed, and feeble.† There was no orthopnœa. This group of symptoms marks one of the most interesting cases ever presented to the physician. The diagnosis reached by the examiners was that the symptoms presented were due to the presence of fluid in the left pleural sac, but there was doubt as to whether this fluid was serous or purulent in character. The absence of hectic fever, colliquative diarrhœa, and night sweat, rendered the assumption of empyema somewhat unjustifiable, while the symptoms were of too grave a character to be attributed to simple effusion. Dieulafoy's Aspirateur (described on page 225, vol. ix., of this Journal), was used, and all doubt immediately removed; the barrel of the syringe was by the backward action of the piston loaded with pus. As there was no time for delay, the operation for empyema was arranged for the next day. The operation was

† There were numerous petechiæ upon the upper extremities.—Ed.

skillfully and successfully performed by Dr. J. M. Holloway. There was nothing of note occurring during the operation excepting marked cyanosis with extreme dyspnœa, this being relieved by ammonia and whisky. Thirteen pints of pus were removed. As the trepline was used to remove a segment of the rib (at the point of election), nothing was done to insure the maintenance of a free drain. The patient was much relieved, and did well for many days (nine), when he died suddenly apparently from some cardiac trouble. The nurses could give no description of his last symptoms. It was interesting to observe during the flow of pus from the sac that the epigastric tumor gradually faded away, and that the apex-beat of the heart retreated from its position over the right pleural sac to a position approximating its normal location.

The points of special interest in this case are: 1st. The peculiar, sensitive, pulsatile tumor over the epigastrium. 2d. The extreme pulmonary atelectasis throughout the entire left lung, with suspension of tubular breathing in the lower lobe, and diminished tubular breathing in the upper lobe (the finger passed through the aperture made by the trephine did not reach the lung). 3d. The large amount of pus in the pleural sac. 4th. The absence of orthopnœa under such circumstances. 5th. The extreme deviation of the apex-beat of the heart. 6th. The absence of colliquative diarrhœa, night sweat, and hectic fever. The aspirateur used was made for Dr. Holloway by Tiemann, of New York. Dr. Gaillard asked the opinion of members as to the prognosis in idiopathic empyema as contrasted with that in empyema of traumatic origin, stating that he had always observed best results in the latter variety of this trouble.

Dr. Octerlony alluded to a case in which a very large quantity of pus was removed. It was found in the sectio cadaveris that the lung was one vast abscess containing pus.

Diseases Affecting the Nervous System.—A case of epilepsy in a lad ten years of age, who had frequent and severe seizures; the fits were arrested by use of blisters applied behind the ears, the

blisters being repeated as long as they would produce any effect upon the skin. Dr. Morton, who treated the case, stated that no recurrence of the attacks had been known up to the present. Dr. Larrabee thought he had derived marked benefit in some epileptics by the use of "Chapman's spinal ice bag," for an hour each day. J. A. LARRABEE, M. D., Secretary.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

NEW YORK, 1871.

It is believed that the experience of the past five years has demonstrated not only the utility, but the necessity of the institution at Binghamton known as the "New York State Inebriate Asylum." We speak advisedly when we affirm that at no time has its prospects for usefulness been more promising, or has it been in so good a condition, so far as the treatment of patients is concerned, as it is now. We have sought to make it what it was originally intended to be, a reformatory Christian home.

There are very many persons in our State and throughout the country, the victims of a terrible mania for drink, who need the salutary treatment which this institution affords, and who, without such aid, must in all human probability perish. We, therefore, disclaiming every object except an earnest desire to aid in restoring to their friends and to society a class of men fallen indeed, but not beyond recovery, would earnestly commend this institution as an efficient means for securing an end so important and inestimable.

We deem it proper to state that ample means are provided to meet the physical, intellectual, and religious wants of the patients. The asylum occupies a remarkably healthful and beautiful site. It is furnished with baths, and a great variety of

amusements; with a good library and reading-room, which is supplied with the leading daily newspapers and the American and British magazines.

The rules of the institution require *regularity* in regard to meals, the hours of retiring and rising, and the attendance on the religious exercises of the establishment.

The asylum has been placed under the charge of Dr. Daniel G. Dodge, a man of superior administrative qualifications, and towards whom there is but one sentiment prevailing with the officers of the institution and among the patients, that of profound respect for him as a Christian gentleman, and confidence in him as a skillful physician.

WILLARD PARKER, M. D.,
New York, N. Y., President Board Trustees.
Rev. SAMUEL W. BUSH, Register.

LOUISVILLE, February, 1871.

Professor W. Y. Gadberry:

Dear Sir,—There is no fact which a large correspondence with the most prominent physicians of the South impresses more painfully and more constantly upon my attention than the almost utter ruin entailed upon innumerable physicians by a failure to obtain compensation for attendance upon the negro laborers by whom they are surrounded. It is impossible for the physicians of the South to refuse attendance when called to the bedside of the sick and pennyless freedman, though it be demonstrable at the time of "the call," that the severe and and arduous labors necessary will be wholly unrewarded. No one who has a proper feeling for his brethren can fail to seek some information whereby practitioners enduring such unrequited and exhausting labors may be benefitted, if not wholly relieved. It is known to me that the physicians of your State have successfully adopted a system which gives the best medical service to the freedman, and secures an adequate reward for the physician. I have to ask that you will give or procure for

publication the facts and details connected with this system.

Truly yours, E. S. GAILLARD.

LOUISVILLE, KY., February, 1871.

Professor Gaillard:

Dear Sir,—I reply with pleasure to your letter. The difficulty of collecting medical bills from freedmen in the South is a sufficient reason for suggesting any plan that would secure the profession against loss from that source. Individual responsibility on the part of the freedmen cannot be assumed in their present condition, and the annual contract system adopted by some members of the profession is objectionable for the following reasons:

1st. It is a contract to render an indefinite and perhaps unendurable amount of labor for a definite sum of money.

2d. As the contract is made with one or two physicians only, it creates a monopoly in their behalf, and unless carried out in good faith leads to neglect of patients.

3d. It is contrary to the code of medical ethics.

To obviate these difficulties and harmonize the profession, I suggested a trust-fund system in 1867, but it was not adopted until January, 1870. It has now been tested by the physicians of Yazoo City, Miss., and the result can learned by reading the graphic description given by Dr. J. P. Moore in his letter to me. For the benefit of those who desire to adopt the trust-fund system, I would suggest that the contract be signed in the presence of witnesses, and that if further security is demanded, a mortgage clause be added, conveying crops, stock, and other property; in which event it should be acknowledged before a proper officer and recorded.

Yours, truly,

W. Y. GADBERRY, M. D.

YAZOO CITY, MISS., February, 1871.

Prof. W. Y. Gadberry, M. D.:

Dear Sir,—In compliance with your request (made by letter recently) as to the practical working of the Mutual

Medical Fund System, as inaugurated by us here for large plantations one year ago, I take pleasure in sending you a blank for publication in the Richmond and Louisville Medical Journal, and in stating that the system has proved quite satisfactory. It, in the first place, builds up a fund ample enough to fully renumerate us for medical services under ordinary circumstances; more indeed than communities pay to the profession under the common custom of each paying his individual bill. Under this system, the laborer, person or head of a family, whether white or black, when contracted with feels that he has secured to himself and family medical attendance at a cost that he can well afford, and therefore under no ordinary circumstances can his medical bill financially ruin him; consequently the physician is early and cheerfully sent for, so that none suffer for want of attendance. In the second place each subscriber has the privilege of choice, selecting the physician he most desires, thereby breaking down the unfair element of a monopoly that is so prominent when an individual physician *contracts* in favor of himself. The mutual fund system, by opening the door to all regular physicians and inviting them to participate in its labors and rewards, is exempt from the justly censured charge of bidding for practice at less rates than those established by the profession.

In the third place it provides that only so much of the fund as is necessary to liquidate the physician's bill, made against said fund at customary rates, shall be paid, the balance to be returned to the parties in proportion to contributions; thus the physician getting only that which he earns, is relieved from the imputation of negligence or indifference from selfish motives, which is so often charged against those who contract for themselves at a stipulated amount *per annum*, regardless of the amount of labor performed. To sum up, I would briefly state, that the advantages are:

1st. It makes medical attendance attainable by all for a reasonable sum.

2d. It encourages patronage to the profession. Without some system of the kind, many negroes would die without call-

ing a physician; others would only send when too late, from fear of the doctor's bills.

3d. The fund, is ample, indeed more than the amount generally paid by an equal nnmber of those in good circumstances; consequently it is available as a good source of income to our profession.

4th. The negro, who has required no service during the year, realizes his obligation to pay his *pro rata* of contribution as much as though he had been the object of attention. All are anxious to pay.

5th. It destroys monopoly, and gives each laborer his choice.

6th. It is free from the ethical objection of practicing medicine by annual contract for a stipulated sum.

7th. Under it the physician does not feel that he is imposed upon by being summoned to slight ailments, and is free from the imputation of negligence.

The only objection is that in some instances the fund is exhausted before the close of the year, thereby entailing some labor upon the profession without remuneration. When this is the case and more than one physician has a claim against it, the trustee pays a *pro rata* on each one's account.

This objection weighs nothing in my judgment when compared with the advantages.

I take pleasure in recommending the adoption of this system to the profession in all localities where plantations are large, and the number of labors upon them sufficient to build up a fund of two hundred dollars and upwards. Herewith you will receive a blank form of the agreement adopted and successfully used by the physicians of this county.

Yours, Very Respectfully, J. P. Moore, M. D.

AGREEMENT.

—— COUNTY, STATE OF ——, —— DAY OF ——, A.D., 187—.

The undersigned parties of the first part, agree and promise to pay to ——, as trustee, and party of the second part, the sums of money set opposite to their respective signatures for the

objects and purposes herein named. That is to say: the said monies are to constitute in the hands of said trustee a general physicians' fund for the common benefit of the parties of the first part, and the members of their respective families. Each individual subscriber hereto to have the privilege, in case of need of a physician for himself or herself, or for any member of his or her family, to call in for his or their attendance or attention, any physician or physicians belonging to the association known as the "Medical Society of —— county," and any and all physicians so called in by any of the parties of the first part are to be paid for their respective services out of the aforesaid fund by said trustee. The sums of money subscribed as aforesaid by the parties of the first part to be retained or collected by said trustee on or before the —— day —— out of the shares of crops to to be raised on said —— plantation that may be due or coming to the parties of the first part respectively. Each of said parties of the first part, in making his or her subscription to said fund, is to subscribe and pay —— dollars for himself or herself, and —— dollars for each member of his or her family that will enjoy the benefit of said fund. If, after payment of all physicians' bills herein provided for, any balance or overplus of money belonging to said fund shall remain in the hands of said trustee, the same shall be returned to the parties of the first part in proportion to their respective paid subscriptions to said fund.

In testimony whereof the parties of the first part have hereto set their signatures, with the amounts subscribed by them respectively placed opposite their respective names.

REVIEWS.

"Judex damnatur cum nocens absolvitur."

ART. I.—FIRST MEDICAL AND SURGICAL REPORT OF THE BOSTON CITY HOSTITAL. Edited by J. NELSON BORLAND, Physician; DAVID W. CHEEVER, Surgeon. 8vo. pp. 688. Boston: LITTLE, BROWN & Co. 1870.

Five years having elapsed since the establishment of the Boston City Hospital, the staff of the hospital, at the desire of the trustees, have issued this volume, containing an enlarged and consolidated report of the working of the hospital, and such facts as they suppose "might be of general interest to the medical profession"; it being their wish that "a nucleus of all facts and statistics might be so tabulated that it could readily be enlarged in future volumes as the hospital increases." Though not stated in the preface, yet we know that the intention of the staff is to issue such a report once every five years.

The volume before us is a model of good typography, being printed on heavy, fine paper, in large type, and is illustrated by eight lithographs, two photographs, and two wood cuts.

HISTORY AND DESCRIPTION OF THE HOSPITAL.

This is a description by the Board of Trustees of the construction of the building and its arrangement for the accommodation of its inmates, and its general working, together with a tabular statement of the number of in and out-door patients seeking relief during the past five years, and also the rates of mortality. We learn from it that the number of in-door patients has increased from 475 in 1864 to 2,078 in 1868, and that the mortality, instead of increasing, as is usually the case for some years in a new hospital, has decreased, commencing with 8 per cent. and a fraction, at the end of the five years it is a fraction over 7 per cent. per annum.

We might say here, that as far as our observation has ex-

tended, this is justly entitled to stand as the model hospital of this continent, as far as beauty of construction and the perfection of its general arrangements are concerned. It is true, that it is not as large as many others, having at present, we believe, not more than 250 beds, though, if we mistake not, it is the intention of the trustees to ultimately add to the number of buildings, increasing the capacity to 500. It is constructed on the open corridor and pavilion plan, for which the Hopital Lariboisiere, of Paris, has furnished a model which, we believe, the world has generally imitated wherever corporations and architects have been found who would listen to the experience of the medical profession as to the influence of ventilation and light on the rate of mortality in eleemosynary institutions. When going through the wards of the Massachusets General Hospital and the old Pennsylvania Hospital, which, a quarter of a century ago were the models of this country, and comparing their compact wards, low ceilings, and imperfect ventilation with the airy, commodious, well lighted, and segregated divisions of this hospital, we could not refrain from mentally instituting a comparison of the increased chances which a patient entering the last institution to commence the "struggle for life" must begin with as compared with the former.

PERINEPHRITIC ABSCESS—ITS COMPLICATIONS AND ITS TREATMENT. BY HENRY J. BOWDITCH.

The first article under the above caption is by the veteran Dr. Bowditch. We would here ask wherefore the affectation, for we can look upon it as nothing else, shown throughout the volume by the authors of the articles in refusing to sign themselves as doctors. It is true, the title is not worth much in this country, where it is so easily attained, but custom in the United States not only sanctions, but demands the appendix M. D. to a man's name when he has received the degree of *Doctor of Medicine*, and writes for the medical profession. Our English brethren, who are divided into two classes—surgeons and physicians, only the latter of whom are generally titled M. D., on only looking over this volume may be at some loss to know

by the headings of the different papers whether Dr. Bowditch was not one of the surgical staff.

The paper is a detail of ten cases which came under Dr. B.'s care in and out of the hospital, and is one of much interest. He dwells on the great dangers of chest complications in perinephritic abscess, and the great liability of the diaphragm being perforated, and the contents of the abscess poured out into the lungs. To avoid this he urges an early opening, earlier even than the "common rules of surgery, as now held, would permit." In one instance he and Dr. Blake seem to have persistently urged it where the surgeon (Dr. Hodges) was hesitating and in doubt. On Dr. Hodges finally making the incision no pus was found. The patient, however, did well, and Dr. Bowditch attributes the commencement of the recovery to the operation, believing, regarding it, one of the three following propositions: "As the first, either that a small abscess was really opened at the first operation, but owing to the minuteness of the trocar the pus would not flow; or second, it opened subsequently and gradually discharged, but not sufficiently freely to show itself on the dressing; or third, the issue caused by the opening and discharge of pus from adjacent parts relieved the local, as yet non-suppurating swelling, and thus a cure was affected." If compelled to take one of his propositions, we should prefer the last. The final opinion expressed by him we cannot gainsay from the history of the ten cases recorded.

First, that abscesses about the peritoneal cavity tend usually either to death or long-continued disease unless, second, an earlier operation be done than the usual rules of surgery will at present allow.

As a general thing, Dr. B. prefers opening by means of the trocar, believing with Trousseau, that the bistoury is the most dangerous. In his seventh case, in which the opening was made with the bistoury, severe hæmorrhage followed.

ON EXCISIONS OF JOINTS. BY DAVID W. CHEEVER.

The larger joints were excised by the surgeons of the hospital during five years in twenty-eight instances.

Taken as a whole the ratio of mortality of operations was 43 per cent.

Recovered,	Wrist	0	Elbow	8	Knee	5	Hip	7	Total 20
Died,	Wrist	1	Elbow	2	Knee	1	Hip	4	Total 8
Total,		1		10		6		11	28

Ratio of mortality—Wrist, 100 per cent.; elbow, 20 per cent.; knee, 17 per cent.; hip, 36 per cent. Total, 43 per cent.

Average convalescence—Elbow, 85 days; knee, 247 days; hip, 328 days. Total, 220 days.

Recovery without amputation—Elbow, 5; knee, 3; hip, 7. Total 16.

Amputated—Elbow, 4 (1 died); knee, 2 (2 died). Total, 6.

The elbow was excised for spontaneous caries four times, and for compound fracture six times. None of the carious cases died, but one-third of the traumatic cases did. One of the pathological cases was subsequently amputated, the other three did well, recovering with good motion, and no soreness. A lithograph plate showing the condition of two of them accompanies the article. One-half of the traumatic excisions were subsequently amputated.

Of the eleven excisions of the hip for coxalgia, nine were in children, and two in adults. Both the adults perished, but seven of the children recovered. In operating, Dr. Cheever prefers the V-shaped incision over the trochanter, and turns the flap back and straps it, and in order to secure the freest drainage, does not allow it to fall over the wound until granulation has taken place from the bottom. The operation he regards as trivial as far as the difficulties of its execution are concerned, the bone being found always loosened, and often spontaneously thrown out of socket, and easily removed, the hæmorrhage attending the operation being slight. His best result was in a case where the greater part of the trochanter-major was left, and which protruded from the wound, but which was controlled by extending the leg by a weight, the goodness of the result being attributed to the attachment of the muscles left. There are two excellent photographic illustrations accompanying.

The knee was excised six times, three of the cases recovering "with more or less useful limbs." When successful results follow the operations, he doubts whether the limb left is more serviceable than a good artificial one, thus diametrically differing from Sir William Fergusson (Vide Lectures on Progress of Anatomy and Surgery—Lect. vj—On Excision of the Knee).

CASES OF PNEUMONIA. BY J. N. BORLAND.

We have here a table of 190 cases of pneumonia treated within the hospital, there being admitted within the table only three cases in which the diagnosis was undoubted, and which were expressly admitted and treated for the affection, though a number of them were complicated with other diseases. The uncomplicated cases were 107, and were on an average eleven days sick before entering hospital, and remained there twenty-three days. Of the single pneumonias, the right lung suffered the most in forty instances, the left lung in nineteen. This proportion corresponds remarkably closely in its percentage with that observed by Dr. Austin Flint (American Journal Medical Sciences, January, 1861) in his analysis of 133 cases, in which the right lung was affected in sixty-four cases, the left in thirty-seven. The thermometrical observations taken confirmed the deductions drawn by Dr. Grimshaw, of Dublin, (Dublin Quarterly Journal, May, 1869).

"1st. Pneumonia has (when uncomplicated) a tolerably definite range of temperature.

"2d. The highest temperature attained is usually between 103° and 104° Fah.

"3d. The maximum temperature is usually attained on the third, fourth, and fifth days, after which the temperature falls, and reaches the normal on the sixth or seventh day.

"4th. The height of the thermometer does not necessarily indicate the intensity of the disease.

"5th. The fall of temperature does not indicate the cessation of mischief, but only that the disease is about to enter on the third stage.

"6th. If a high temperature is maintained for a long time

(more than three or four days), or a fresh rise takes place, it indicates either a fresh attack in a previously healthy part or the advent of a complication.

"7th. The temperature and the pulse usually, though not always, rise and fall together.

"8th. The temperature usually decreases before the frequency of respiration diminishes."

The greater proportion of the cases were treated according to the plan of Bennett. Thus treated there was a mortality in these one hundred and seven uncomplicated cases of eleven, nearly one in ten; the great difference between these results and those of Bennett (1 in 32½), causes Dr. Borland to ask the question, "can it be that pneumonia is a disease of severer type in this country than in Scotland."

In Boston, as has bsen observed elsewhere, there is a pretty regular correspondence between the seasons and prevalance of pneumonia. The smallest number of pneumonia patients received into hospital is in June and July, the number then rises steadily until November, when fluctuations continuing through the winter months, the maximum is attained in April.

DISPLACEMENT OF THE UPPER-JAW. BY DAVID W. CHEEVER.

This is a description, by the writer, of three operations (one repeated on tha same patient) removing, or *displacing* rather, the one-half of the superior maxilla in one of the cases, and the entire upper jaw in the other, for tumor in the pharyngo-palatine fossa. The temporary displacement of the entire upper jaw, as performed by Dr. Cheever, is we believe a unique operation, and though the patient died, it was clearly demonstrated that by this mode the largest naso-pharyngeal tumors may be removed. The paper concludes by a comparison of the method of the writer with those of Langenbeck and M. Ollier, of Lyons, which he does not seem inclined to favor, for although M. Ollier claims to have removed by it "probably the largest fibroid ever extracted from this region, "yet Dr. Cheever declares "we shall find, by measurement, that the operater's finger is just as

far from the basilar process when he enters the upper meatus of the nose, as it is when he enters the mouth." However, at the very end of the article he appends the following very candid note:

"Since the above was written we have satisfied ourselves by an operation for pharyngo-polypus, on the living subject, by Ollier's method that the top of the pharynx can be easily reached by the finger or instruments, through his simple downward cut of the nose. The mobility and elasticity of the bones of the nose in life, give much more room and play to the surgeon's finger than appear possible on the dry skull."

TREATMENT OF ACUTE RHEUMATISM. BY JOHN G. BLAKE.

This paper is one of the most interesting of the volume, being the results of treatment tabulated in three hundred well marked cases of rheumatism, it being the object of the writer, as he says, "to ascertain by a close scrutiny of results, whether certain remedies and methods of treatment confirmed claims made by their advocates, and to learn if any possessed advantages over others in the cure of this most unsatisfactory disease."

The treatment was divided into alkaline and non-alkaline. The alkaline was that so strongly recommended and defended by Dr. Fuller, and which is now so very celebrated. The non-alkaline included the use of iodide of potassium, colchicum, opium, guaicum and syrup of lime. Of the three hundred, one hundred and twenty-five were under purely alkaline treatment. Preceding the administration of the alkali, the bowels always received attention, a cathartic or enema being given if needed. The alkalies given were the salts of either potash or soda, and the quantities given were from ʒss. to ʒij., every three or four hours during the first few days, increased if the urine was not found alkaline, and diminished when this was effected, two days usually sufficing to effect this result. We think the writer's experience will be found to have corresponded with the majority of practitioners, when he says, "I have been frequently obliged to diminish the amount recommended by Dr. Fuller before get-

ting the urine alkaline; and even when administered largely diluted in barley or rice-water, many of our female patients could not retain doses sufficient to produce any result, consequently their use was discontinued." Now we know that it has been claimed by the advocates of the alkaline treatment of Rheumatism, that the pathological basis of the disease resided in the acidity of the circulatory fluids and excreta, and that if the blood was restored to its alkalinity, as shown to be on the urine being found alkaline to tests, that not only was the course of the disease greatly abridged, but that all of that which we have most to fear in rheumatism—cardiac complications, was shut out.

We connot give the result of treatment with reference to this point in words better than those of the writer.

"Of the above one hundred and twenty-five cases treated by alkalies during the existence of acute symptoms, and free from any discoverable cardiac complication until the third day, eighteen developed disease of the heart during their stay at the hospital. Thirteen of these affections were endo-cardial, accompanied by the murmurs observed in those cases. Five were peri-cardial, and two of these under my own care terminated fatally. As these were the only deaths either in my hospital or private practice from rheumatism or its complications, and both having been under alkaline treatment from the very commencement, my faith in its protective influence over the heart was somewhat shaken."

The history of one of these cases we quote in full. "No. 2 was a man of thirty-five years, suffering for the first time from acute rheumatism of a very severe form, most of the large joints being affected; admitted to the hospital the sixth day of the disease; joints swollen, red, and painful; perspiration profuse and acid; urine high colored; no affection of heart. I remarked at the time to the house-officer: 'This is an admirable case for testing the value of alkaline treatment; let us carefully observe all conditions required by Dr. Fuller.' The bowels were moved freely, acet. and bicarb. Potassæ given in full doses; liquid nourishment of milk, gruel, and beef-tea prescribed, and ano-

dynes of hyoscyamus and bromide of potassium at night. Urine became alkaline on the second day; on fourth, patient began to develop symptoms of pericarditis. beginning with pain on inspiration, and feeling of distress in cardiac region. Friction sounds, effusion and its accompaniments of dyspnœa, delirium, etc., followed. Active treatment by myself and Dr. Bowditch failed to relieve the disease; local depletion, repeated counter-irritation, with the efforts to sustain strength by means of liquid nourishment in abundance and stimulants in moderation were tried. After a few days had elapsed, and no improvement manifesting itself, the administration of quinine in doses of five grains four times a day, as recently recommended in pericarditis with delirium, was resorted to, but without any beneficial result. The patient died in seven days after the first manifestation of the disease.

["I have often since regretted that no attempt to evacuate the fluid by tapping the pericardium was made in either of these cases, as has recently been successfully done in similar ones."]

Under the non-alkaline plan there were treated one hundred and seventy-five cases of well marked rheumatism. Eighteen of these had heart troubles—chiefly endocardial with mitral murmurs to come on after the third day in hospital. At the time of discharge from hospital, it had disappeared from five of these, from seven of those under alkaline treatment. The average stay in hospital was thirty-five days, deducting ten days for remaining during convalescence, making the treatment extend over twenty-five days. The blister treafment of Dr. Herbert Davies had a fair trial in several cases, but as he remarks, "the manifest inconvenience, and even danger attending it in cases where many large joints are affected, precluded its general use. In those so treated the pain was relieved for the time, but returned in the course of a few days with less severity, and continued about the average time. Its protective influence over the heart, we could not fairly estimate in the small number of cases treated; none of them, however, showed any tendency to cardiac affection.

In private practice, Dr. Blake says, by carefully selecting his cases from robust subjects, that he has met with much better success from the alkaline treatment, than in hospital cases. The treatment in a small class of robust subjects, such as but rarely come into hospital, he thinks the best known.

On January 12, 1869, a paper, on the Natural History of Rheumatic Fever, was read before the Royal Medico-Chirurgical Society by Drs. Gall and Sutton (vide Medical Times and Gazette, July 16, 1863,) in which was recorded twelve cases of rheumatic fever in Guy's Hospital under the care of Dr. Gall, and thirteen in London Hospital under charge of Dr. Sutton, in which the disease was allowed to run its natural course, *mint-water*, simply as a placebo, being given to the patients. The total average duration of acute symptoms in these cases, as estimated by the thermometer and general symptoms was 9. 1 days; the total duration of the acute symptoms dating from the time of illness before coming into hospital to their cessation was 17 days.

Eleven of these patients entered the hospital with the heart free from any complication, and left it intact.

These results when compared with those of the administration of drugs in the treatment of the affection, are certainly not encouraging to the continuation in any of our present prominent lines of routine treatment before the profession. This Dr. Blake really acknowledges, and hopes that before the Boston City Hospital may send out another five years of its experience, that we will know something definite of the value of drugs in rheumatism, saying, "perhaps, when more attention has been given to the natural history of the disease, and it is better understood, we shall be able to prescribe intelligently, and if not able to abbreviate its duration, at least spare the patient the taking of nauseous and unnecessary drugs."

The final summary of the three hundred minutely tabulated cases we think sufficiently interesting to give entire.

SUMMARY OF CASES OF ACUTE RHEUMATISM.

ALKALINE AND NON-ALKALINE TREATMENT.

Whole number of cases, . . .	300

Under alkaline treatment,	125
Under non-alkaline treatment	175

HEART AFFECTED.

Under alkaline treatment,	27
Under non-alkaline treatment,	38
Total,	65

HEART UNAFFECTED THROUGHOUT.

Under alkaline treatment,	98
Under non-alkaline,	137
Total,	235

HEART AFFECTED ON ADMISSION OR LESION COMING ON DURING FIRST DAY.

Under alkaline treatment,	10
Under non-alkaline treatment,	14
Total,	24

HEART BECAME AFFECTED AFTER FIRST DAY IN HOSTITAL.

Under alkaline treatment, in 17 cases 13, 22-31 per cent.
Under non-alkaline treatment, in 24 cases 13, 5-7 per cent.

CARDIAC DISEASE DISAPPEARED WHILE IN HOSPITAL.

Under alkaline treatment,	7
Under non-alkaline treatment,	9

FORM OF HEART DISEASE.

ENDOCARDIAL.

Under alkaline treatment,	24
Under non-alkaline treatment,	36

PERICARDIAL.

Under alkaline treatment,	8
Under non-alkaline treatment,	4

AVERAGE DURATION.

Under alkaline treatment,	24¼ days.
Under non-alkaline treatment,	32 1-18 "

LONGEST CASE.

Under alkaline treatment,	90 days.
Under non-alkaline treatment,	170 "

SHORTEST CASE.

Under alkaline treatment,	5 days.
Under non-alkaline treatment,	3 "

ART. II.—THE BLACK ARTS IN MEDICINE. By JOHN D. JACKSON, M. D., Danville, Ky. Cincinnati: Robert Clark & Co. 1870.

This is the title of one of the most amusing, most entertaining, most sarcastic, and most useful monographs that have been received for many months. The paper thus published was read by its industrious, accomplished author before the Boyle County Medical Society, September 13, 1870. It is published in a style most unusual, and one highly creditable to the publishing House. It is a quarto of 28 pages, printed on tinted paper, in exellent type, and the title-page illuminated. The author does not, as would be supposed by the title, address himself to the elucidation of those arts which one would naturally seek to study in the musty tomes representing the black-letter literature of the Medical Library, but, with an earnestness and directness evidently characteristic, devotes himself to the exposure and denunciation of those many and infamous arts by wnich the medical charlatan (albeit recognized unfortunately as "a regular physician") seeks to ingratiate himself with the secular public, and to obtain the only reward sought by the medical tradesman, a clientage, regardless of its character and derivation; but a clientage. These amusing and bitter facts are developed in a letter ostensibly addressed by Dr. Solomon Machiavelli Sharp to Dr. John Charlatan Greene, his nephew; this letter giving a succinct account of the most useful methods of obtaining a practice. As each reader of this journal knows nothing of course of these peculiar devices, he will be not unwilling to learn how those whom he sees to be in active practice, and are yet wholly unworthy of it, secured the goal of their ambition. These men, it is admitted, are in every respect despicable; professionally ignorant and dishonest, personally deceitful, disreputable and treacherous; yet as they constitute a class in the great professional school, one which offers a fit basis for psychological as well as professional and personal study, a few words in analysis of Dr. Jackson's satire will be both opportune and profitable. Such a satire comes with special appropriateness from Dr. Jackson, for it is

well known that with a large and excellent practice, he has studiously, even morbidly, avoided securing such a result in any other manner than that which secures the esteem and respect of the profession, as well as the love and confidence of the public. Machiavelli Sharp declares to his nephew what seems to be the guiding principle of a host of physicians, that "the chief end of the doctor is to get practice," and the chief way to do this is by "honeyfuggling" the public. How is this great feat (whose accomplishment seems more dear to so many than character, knowledge, reputation, and even respect) to be accomplished? Machiavelli thus advises, and his advice is good, for each reader daily sees what its adoption accomplishes. "Push into practice at all hazards"; "recollect *audaces fortuna juvat*"; "studying will keep you back in practice"; "skim the surface"; "be qualified with the *formula prescribendi*"; "luck's all"; "you are paid, go which way you will"; "make all the noise and bustle you can, to make the town ring of you, that every one may know there is such a physician"; "it signifies little how this be done, so it is done"; "frequently put yourself in the public prints"; "bend or truckle to the humor of your patients"; "fawn upon and soothe man, woman, and child"; "be introduced into a hospital, and your business is done for, be your success what it will"; "if your wife should mind business in her way, it will increase yours"; "set up an equipage and buy books"; "run into debt because your creditor will employ you"; "fashionable dress and gesture, and manner of feeling the pulse are half the business"; "have an itching to make your name known by writing a book"; "write so that no man can make anything of it"; "keep company with old women, midwives, nurses, and apothecaries"; "be in league with newspaper men, and have you name in their local columns; not once, but like Helmbold and John Bull, until the people get it imprinted on their minds"; "drive over children, and have your name in the papers"; or if desperate, "lose a dog, and then advertise your name in large capitals"; "drive a peculiar horse"; "cultivate style and manner"; "thank your patient for putting out

his tongue"; "be a common-sense doctor, it wins over the yeomanry;" "be practical," of course, it sounds well and means nothing; "get two or three diplomas, and if you do not frame them and hang them in your office for inspection, which might look vulgar, let the fact of your having them be generally circulated"; "make a parade of new books, put one or two in French, German, and Italian among them"; "keep your instruments always exposed"; "use the thermometer, and the urinometer, and the hypodermic syringe"; "on giving a new remedy (well known to the profession), say to your patient that you were the first to use it"; claim a well-known galactagogue, it is a most profitable though despicable device; "join some church, be called out frequently, come in late, leave before the services are concluded"; "stand in the doorway of the church, shake hands with and bow to as many as possible, it is very profitable"; Free Masonry, Odd Fellowship, Teetotalism, with membership in all kinds of clubs and societies, may be made to pay"; "activity at primary elections and ward meetings pays well"; "bob your head to every one and shake hands with all, it pays well, and hold the hand you shake a long time"; "if any one ceases to employ you, go to him and say your feelings are hurt"; "call an ephemeral fever typhoidal, a sore throat diphtheria, a hemicrania spotted fever"; etc., etc. The list cannot be given entire. It is very valuable. These devices will inevitably bring practice, and their adoption costs little, only a forfeiture of character and respect. What are these in exchange for practice? Dr. Jackson has omitted a few hints that are very valuable—viz., to drive persistently about the streets, especially on Sundays, and when the streets are crowded; stop at all hotels; call at large private houses, ring the bell, and find, *after* you enter, that you have mistaken the house, this is very successful; change your boarding house often, and be introduced to all at each house; leave your slate at several drug stores, and employ some one to write "calls" upon them; subscribe to all charaties, and for the building of churches, whether you pay anything or not; sign all letters of invitation

for concerts, entertainments, etc., for these will be published; at Christmas-time give books and other presents largely, and if you happen to publish a medical journal, give copies of it to your male and female friends, the act is amusing and queer, but it is said to be very profitable in money, if not in character. If one will study this satire of Dr. Jackson, and avoiding all the arts so well satirized, pursue the course tacitly or constructively indicated, he will become a wiser, purer, and better man, a more efficient, trustworthy, and accomplished physician. This is exalted commendation for so small a publication, but the praise bestowed is well deserved.

MISCELLANEOUS.

"Non omnes eadem mirantur amantque."

The Cholagogue Action of Mercury.—It will be remembered that Dr. J. Hughes Bennett, in the report of the Edinburgh Committee to the British Medical Association, denied the specific action of mercury upon the liver; one of the conclusions, from a carefully performed series of experiments, being: "There is not one single fact in the history of medicine which shows that mercury stimulates the liver or increases the flow of bile." In a recent paper in the "British Medical Journal," he states that objection has been made to the report on the ground "that mercurials possess some specific power of exciting the biliary secretion by acting on the orifice of the common bile-duct, and so stimulating the secretion through the nerves which connect it with the liver, just as pyrethrum or vinegar stimulates the salivary glands when they are applied to the orifices of the salivary ducts." With the view of testing this idea he has performed a series of experiments, from which he deduces the following conclusions:

"1. That mercurial preparations digested in the stomach do

not irritate the orifice of the common duct in the duodenum, or induce any flow of bile into it.

"2. That no other kind of local irritation causes increased secretion or flow of bile into the duodenum.

"3. That the gall-bladder is not contractile, and that, consequently, no irritation, direct or indirect, nor any kinds of reflex action, influence it.

"4. That pressure upon the gall-bladder or liver in consequence of extensive contractions of the muscles surrounding these organs, causes a copious flow of bile into the duodenum.

"In consequence of the demonstration of the non-contractility of the gall-bladder made in these experiments, I carefully examined the structure of the viscus, in the rabbit, dog, and man; and, contrary to what is generally supposed and taught (see 'Quain's Anatomy,' seventh edition, p. 878), satisfied myself that it has no muscular coat.

"These facts thus arrived at, it seems to me, completely set at rest the speculations which have been put forth as to the possible action of mercurials by local irritation of the extremity of the gall-duct in the duodenum. They further show that, whilst neither mercurials nor irritations of any kind induce a flow of bile from the duct into the bowel, neighboring muscular contraction has that effect—a circumstance which confirms the well-known beneficial influence of exercise and muscular exertion in certain bilious disorders.

"The experiments now detailed conclude the inquiry into the action of mercury on the liver, and demonstrate that the opinions of those who cling to the employment of the drug, on the ground of its local action, are in no way better founded than such as have prevailed with regard to its constitutional effects."

Double Ovariotomy.—In the journal of the Gynæcological Society of Boston, for February, is a communication from Dr. A. Reeves Jackson, of Chicago, reporting a case of double ovariotomy in a woman who had menstruated regularly from the age of seventeen to time of operation. The interesting fact in

her case * * * is, that subsequent to the operation *she continued to menstruate just as regularly (with a single exception) as before.*"

Dr. Jackson has "communicated the details of the case to Drs. Atlee, Spencer Wells, Baker Brown, Charles Clay (of Manchester, England), and other ovariotomists. * * * * Similar cases have occurred to each one of them."

Dr. Storer had seen "two cases of apparent menstruation after double ovariotomy, and one after removal, with the ovaries, of the uterus also." No satisfactory explanation has been suggested.—*Baltimore Medical Journal.*

Dr. Cox, of South Hadley Falls, Mass., relates in the journal of the Gynæcological Society a case of uterine fibroid which had been about "the size of a small child, eighteen months previously, but under the steady employment of bromide of potassium, at Dr. Storer's suggestion, had now almost entirely disappeared."—*Ibid.*

MEDICAL NEWS.

'Nulla dies sine linea."

The American Medical Association meets in San Francisco, California, May 2, 1871, at 10 o'clock A. M. Secretaries of all medical organizations are requested to forward lists of their delegates, as soon as elected, to the permanent secretary, Dr. W. B. Atkinson, of Philadelphia. Any respectable physician who may desire to attend, but cannot do so as a delegate, may be made a member by invitation, upon the recommendation of the Committee of Arrangements. Twenty committees on special subjects are expected to report, and with these the committees (33) on epidemics are also announced as being expected to do something. How many committees will report, it is easy to de-

termine. Most will be continued, and the chairmen will, of course, be allowed to protract the period of their interesting gestation until the actual force of gravidity brings them to parturition; when again will there be written, in spirit if not in fact, upon these reports the just, familiar, and melancholy commentary "*montes parturiunt et nascitur ridiculus mus.*" These cases, however, will not be prejudged; the womb of the future contains in this connection most interesting offspring; the scientific world awaits the period of labor, and is ready to weigh and measure the progeny.

The Kentucky State Medical Society meets at Covington, Ky., April 4th, 1871. This anouncement is again made, and it is hoped that the physicians of the State will remember the necessity of general attendance to prevent a disaster that must otherwise ensue, the disruption of the most important medical organization of the State. There are but five counties in this State in which medical societies have been formed—Jefferson, Boyle, Fayette, Nelson, and Lincoln counties. Cannot the physicians of the different counties hold meetings and organize societies to be represented at Covington?

The Alabama Medical Society meets at Mobile during this month (the 21st). This will be an important meeting, as it is well known that matters of grave import will be brought forward for efficient disposition.

The following proceedings will be read with interest:

BELLEVUE HOSPITAL MEDICAL COLLEGE.

At a meeting of the Faculty of this college it was

Resolved, That in the death of Dr. George T. Elliot the Faculty have to deplore the loss of one of the founders of the institution, one who has been connected with it from its inception, and who, by the brilliancy and variety of his talents and attainments, was a main agent in promoting its success and usefulness.

Resolved, That we tender our heartfelt sympathies to the family of our late colleague for the loss of one who was endeared to all by his kindly nature and social qualities as much as he

was respected for his spotless integrity and his high professional skill and acquirements.

R. W. McCready,
Austin Flint,
A. Flint, Jr., } Committee.

At the regular meeting of the Covington and Newport Medical Society, held on the 14th of February, 1871, the following resolutions, offered by Dr. D. H. Jessup, were unanimously adopted:

Resolved, That it is with feelings of regret that we have learned of the recent death of one of our members (Dr. Samuel Hunter) of this city.

Resolved, That in his untimely death, having been cut down in the very morning of his professional life, this Society and the profession have lost a member who gave bright promise of professional distinction.

Resolved, That we tender our sympathies to the family of the deceased, with expressions of esteem for his exemplary private as well as professional character.

Resolved, That a copy of these resolutions be presented to the bereaved family, and also furnished to the Cincinnati and Louisville Medical Journals. W. W. Henderson, President.

A. G. Drury, Secretary.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

EDITORIAL BREVITIES.

Want of space compels the adoption of brevities.——The editor regrets that as no type with French accents was procured with the new type for this journal, many words appear in this number incorrectly presented.——The readers of this journal must have noticed the increased and increasing amount of entirely original matter published in its pages. The editor is striving to make inapplicable to this work the charge made so justly by foreign journals against American medical periodicals, viz: that they have no original support of value, and are edited chiefly with "the scissors."

THE RICHMOND AND LOUISVILLE

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"Qui docet discit."

ART. I.—BROMIDE OF POTASSIUM IN EPILEPSY. By B. W. STONE, M. D., Assistant Physician Western Lunatic Asylum, Kentucky.

Much has been said and written lately of the value of bromide of potassium in the treatment of epilepsy. Few physicians consider the remedy destitute of virtue in this disease; some have certainly overestimated its value. Dr. J. Russell Reynolds, London, and Brown Sequard, of Paris, have probably made as extensive trial of the medicine as any others, and the views of these distinguished physicians certainly are entitled to the highest consideration. They have agreed in their verdict as to its value.

Of the cases under their charge, some (a considerable portion) seemed to have been relieved; at least have had no seizure for years, and are still well; others have gone for several months, even a year or two, without a seizure; and in the omissions of the medicine attacks re-commenced. These ceased again when the medicine was re-administered. In a third class the spells were materially moderated in severity, and were somewhat less frequent; these effects invariably ceased upon the withdrawal

of the medicine. In a small proportion the drug was of service for a time; and afterwards seemed to lose its efficacy entirely. In a smaller number still it was of no service whatever.

These results accord generally with those we have obtained from the use of the medicine in the management of epilepsy as it exists in this asylum, though to a less favorable extent; our cases generally being of a more serious type than those to be found outside of lunatic hospitals. The cases (between fifty and sixty in number) comprise a few slightly deranged; many who are periodically furiously maniacal, and a few demented; all of these have been under treatment with the bromide of potassium at different and for varying periods of time. With a large number the medicine has been constantly used for eighteen months. Only one patient seemed cured, a man, aged twenty-eight, was under treatment in the asylum four months for epilepsy, *le haut mal*, caused by fright during the late war. The spells which previously had occurred every day or two entirely ceased on the exhibition of the bromide. He took 22 grains bromide of potassium, and ℥j. tincture of hops three times a day in about a gill of water. The dementia, under which he had been laboring, subsided, and he left the asylum, having promised faithfully to continue taking his medicine for fifteen months, and report to me immediately should his spells recur. We think he will carry out these promises, as he seemed anxious to recover entirely, and we promised him a better prescription should the one he was using fail, having previously endeavored to impress him with the conviction that we were "death on fits." Two cases had no epileptic seizures for periods of seven and nine months; after which both these refused obstinately to continue the medicine, avering they were cured of epilepsy, and their stomachs were being injured by the medicine. They had often neglected taking water with the medicine, a precaution necessary in long-continued use of bromide, as materially moderating the irritant effect of that drug upon the stomach. In ten days after the omission of the medicine both had convulsions. The medicine has been since recom-

menced with one of these, with its original effect. Eight patients have had over four months respite from the convulsions; twelve or fourteen have passed over two months without having a recurrence; a larger number over one month. About twenty patients were treated irregularly, the complications and other circumstances rendering the idea of cure hopeless. The medicine was administered to this class mainly (though all, with a small exception, had trial of the medicine for several consecutive months, in order to fully test their curability) during periods when they were afflicted with an unusual number of convulsions to check them and lessen their severity; this effect was generally obtained; and in not more than a half-dozen of the epileptic patients in the asylum has the beneficial effect of the bromide of potassium not been clearly manifest in some degree.

The administration of the medicine has, in most instances, we believe, been faithfully attended to. The well-known, almost universal eagerness of epileptic patients for medicine, as well as the desire on the part of attendants to ward off the most violent and dreaded form of maniacal attacks, which often follow the convulsions, both together generally insure a pretty regular administration of the remedy. In the selection of a prescription for general hospital use, we defer to the experienced judgment of Brown Sequard, who combines with the bromide the iodide of potassium, the bicarbonate of potassa, and the bromide of ammonium, in about the following proportions:

[We have used this prescription for the past thirteen months almost altogether.]

℞—Potassæ bicarbonatis, ℥ij.
Ammonii bromidi, ℥vij.
Potassii iodidi, ℥iij.
Potassii bromidi, ℥iij.
Infus, calumbæ (British) Oj.

Give a teaspoonful before each meal and three teaspoonfuls at bedtime, to be taken in water. The quantity of the bromide of potassium may be increased to ninety grains during the twenty-four hours, which is certainly a sufficient quantity, under

any circumstances, for long-continued use, though we believe few require more than the quantity (67½ grains) prescribed as above by Brown Sequard. At least fifteen or twenty of the patients taking the prescription have had upon the face and elsewhere the vesicular eruption, which sometimes follow the administration of the bromide and indicates its full effect. For curative results the prescription should be taken for at least fifteen or sixteen months.

The opportunities of watching patients at night in order to ascertain certainly whether or not they have had spells, have not been good, with a few exceptions it is, however, certainly extremely rare that persons have convulsions during the night, without being heard by fellow patients or attendants in the ward; there is also but little trouble in detecting, after the patient has arisen in the morning, that he has had a convulsion by the sluggish, stupid countenance and demeanor nearly always present.

It is, of course, impossible that the bromide, or any other remedy, can ever relieve every case of epilepsy, originating as it does from so many different causes; the subsequent and dependent brain changes also being often of very degenerate character.

The following case will abundantly establish this: The patient, a man, aged forty-five, had had epilepsy for a number of years; knew no cause of his affliction; had taken the bromide with but little effect. After his death, about eleven months ago, a number of osteophytes were found upon the surface of the dura mater; also a cylindrical mass of probably the phosphate of lime, three-quarters of an inch in length and one-half inch in thickness, embedded in the posterior lobe of the right hemisphere. (We preserved the specimen exhibiting this, it is now in possession of Prof. J. M. Holloway, of Louisville.) The partition between the lateral ventricles was entirely broken down, seemingly by ulceration—there were three ounces of fluid in the ventricles, about two ounces in the cavity of the arachnoid. There was no indication, during life, of paralysis, with the ex-

ception of a slight deficiency of articulation. In cases such as this, remedies may palliate, may ward off for long periods the convulsions, but can never entirely relieve. In conclusion, although owing, no doubt, to the grave and troublesome complication of insanity with all of our cases, we may have not yet effected any cures with the bromide of potassium, the efficiency of this drug in prolonging, in some cases indefinitely, the interval between the attacks, in often warding off immediately threatening attacks, in procuring sleep and relief from the terrible cephalalgia so often preceding or succeeding convulsions, in moderating the convulsive movements (during spells), in shortening their duration, certainly makes it an invaluable boon to the epileptic.

No one will neglect the use of this remedy, so valuable in the amelioration of the condition of the unfortunate subjects of a most terrible malady, even though it may be powerless to cure.

ART. II.—SOME REMARKS SUGGESTED BY A REVIEW IN THE RICHMOND AND LOUISVILLE MEDICAL JOURNAL OF JANUARY, 1871, etc., of Dr. S. S. SATCHWELL's Paper, termed "The Topography and Diseases of New Hanover County, and a Reply to the Paper previously Contributed by Dr. W. A. B. NORCOM, of Edenton, N. C." By R. E. PEYTON, M. D., The Plains, Va.

Upon the merits of the two "papers" above named the writer of these remarks can say nothing, as he has not seen either of them, and knows nothing more about them than what is stated in this brief review. It is for some of the positions assumed by the reviewer, and by other writers, whose papers have appeared at different times in this journal, that these remarks are intended.

To make this paper as brief as possible, I will state that I understand the reviewer, and the other writers alluded to, to take the position that the distinguished practitioners of an age

recently passed, and their predecessors, who advocated the free use of "mercury and the lancet, and antimony and purgatives, and emetics," etc., in certain cases of inflammatory diseases which they describe, were *wrong* in their opinions and practice, and that the mode of practice that is found best as applied to the inflammatory diseases and fevers of the present day (or of the last twenty or twenty-five years) would have been equally as proper then as at present, and much more successful.

With this opinion I take issue, notwithstanding the scorn and ridicule that have been cast upon these advocates of the antiphlogistic treatment in their day; and in doing so, make this statement, which I propose to maintain by a simple relation of facts—viz., that the prevailing type, or status, or pathological condition of the diseases of the past age alluded to, in which the antiphlogistic treatment was so much practiced, was quite different from that of the diseases of the last twenty or more years. The force of the circulation, the condition of the blood, and of the nervous system, and the character of the local inflammations, were entirely different, and required a different treatment.

The following is the condition of hundreds of cases to which I was called in those days: The pulse was full, strong, hard, rapid (from 85 to 120), and resistant to pressure; the skin hot and dry; the head aching violently, with a feeling of fullness and heaviness; and when there was local inflammation the pain, at its seat, was often most violent and acute. Besides these the eyes and face were red, and there were symptoms of general plethora and congestion, with great general malaise, loss of appetite, furred tongue, and inability to sleep.

Such were the general symptoms of violent cases of remittent fever, pleurisy, pneumonia, puerperal fever, local inflammations, inflammatory rheumatism, etc., of those days.

When called in the early stage of these symptoms I rarely failed to give *immediate* and *permanent* relief by one or two free bleedings, and one or two large doses of calomel, followed by the free use of laxatives, diaphoretics, etc. If the first

bleeding, early applied, was carried to actual syncope, a second bleeding was not often necessary. If applied later, or imperperfectly done, its repetition was demanded from one to five times, or more, according to circumstances. I have treated such cases over and over again with the happiest results, without daring to depart in any degree from the strictest antiphlogistic plan. Opiates, tonics, stimulants, or anything approaching to rich diet, were instantly followed by unfavorable symptoms. I have seen this most strikingly true in cases that continued on for weeks, until the patient became feeble and attenuated; and yet I was compelled to keep up the plan of low diet and occasional laxatives, etc., to the end of the case. These things are true of many instances; of course not of all.

In those days I frequently had cases of moderate symptoms, which I expected to relieve in a few days without the lancet, but after trying medicines in vain, one bleeding would soon bring about convalescence. In other cases the pulse would be depressed and weak; but bleeding being indicated by other symptoms, the pulse would rise under its operation, and its beneficial effects were most manifest. So I have known cases in which the only manifestation of disorder would be a sore mouth, or some other part of the body, which would exist for weeks in spite of local treatment, and would at once yield to a large dose of calomel, or salts, or tartar emetic.

Now, this is a short statement of my own experience and practice; but does it not accord with the statements of Sydenham, Cullen, Fordyce, Rush, Armstrong, Eberle, Dewees, Gordon, on puerperal fever, Southwood Smith, Alison, McIntosh, Stokes, Watson, Wood, and a host of others? Men of the highest intelligence, the most acute observation, and the greatest reputation derived from their success. They state, as I do, what they saw and what they witnessed, and the practice which, in certain cases, they found themselves *compelled* to pursue.

There were other types of disease in those days, but the dynamic was the prevailing type, and doubtless errors were often committed then, as they are now, by not correctly appreciating

the case in hand, and consequently not correctly adapting the treatment to the case.

The blood drawn, in the cases above described, was generally covered with a thick coat of blue buff, and the quantity necessary properly to reduce the pulse, or to produce syncope, was from sixteen to thirty-six ounces at the first bleeding. The clot was firm, giving rise to a strong and rapid tendency to adhesive inflammation; but there was no tendency to nervous symptoms when proper depletory measures were early used.

Now, as to my success during this period with the treatment above described, I can say with truth that it was generally most gratifying. If called early the cure was rapid; if the disease had continued three days before proper remedies were applied, then it was a hard fight of six weeks, at least, before recovery. When I happened to be on the ground at the time of the attack, I have crushed some cases of the most violent onslaught in twenty-four hours by one free bleeding, followed by an active purge.

But now let us see the other side. For the last twenty-five or thirty years I have observed a gradual, but sure and unquestionable change in the character and type of the prevailing diseases, and affecting more or less the type of all diseases. The bilious remittent fever, which was so common here in former days, we now almost never have; such cases of pneumonia, pleurisy, puerperal fever, inflammatory rheumatism, etc., etc., as I saw in those days, I now never see. The zymotic affections of which, in my earliest experience, I never saw a case, are now the common diseases of the country, and the lancet, which then I had almost daily use for, I now sometimes do not touch for a whole year. Not that my opinion of its value has changed, but because I so rarely meet with cases requiring it. In the last two years I have used it freely, with the happiest effects; in three cases of inflammation of the womb attended with violent symptoms, all of which were immediately relieved, and lives saved which I verily believe would have been otherwise lost. In April, 1862, I had a solitary case of pure phlogistic remittent fever (in

a young lady) for which I employed, most successfully, two free bleedings, large doses of calomel and other purgatives, at the same time that I was losing her brother by using some small doses of calomel in a case of nervous typhoid fever, the nature of which, at that time, I did not understand.

The pneumonias and pleurisies which I have had to treat of late years I have managed to relieve with tartar emetic, calomel, laudanum, or veratrum viride, given p. r. n., and if necessary, assisted by cupping and blistering.

Now, in regard to typhoid fever, (as far as its character and treatment may bear upon this subject,) my experience corresponds precisely with the statement and views of the judicious authors above named who have treated of it, Mr. Armstrong excepted. Like other diseases, it has its inflammatory type, and that type, in many instances, not only bears the loss of a certain amount of blood well, but is often greatly benefited by it, and in some instances imperatively demands it. For the first fifteen years of my professional acquaintance with this fever, it was more or less of the phlogistic type, and I bled nearly one-half of my cases with benefit; the most of them once moderately, a few twice, or more, and some three or four cases freely; in every instance, I feel assured, with benefit. I have never had occasion to regret bleeding in this disease, but greatly to rejoice at it when comparing my cases with some treated on a different plan. During this period I also used moderate doses of blue mass, and occasionally a little calomel in the early stages with good effect; but after that time I saw that the character of the disease was gradually changing, and gliding more and more into the adynamic form, until in 1861 it assumed the purely nervous type, which at first I misunderstood, and by pursuing in it the treatment I had formely found successful, (*i. e.*, small doses of mercury, etc.,) I lost several cases most unexpectedly. Indeed, mercury in the epidemic of that and the succeeding years seemed to be a fatal poison, and the ill effects of even a small quantity almost irremediable. After some bitter experience I came to a more correct understanding of the peculiar characteristics of the

epidemic, and adopted the sedative treatment, consisting of small doses of morphine, or Dover's powder, or opium, or whisky, three times a day, aided by turpentine, chlorate of potash, and by stimulants and tonics, as they might be indicated, and then had no more trouble. These cases were mostly distinguished by a moderate pulse, but little heat of skin, small quantity of fur upon the tongue, and a great tendency to diarrhœa and nervous symptoms. If I had pursued the course in my earlier cases that agreed so well in these last, I am sure the mortality would have been frightful. Watson, in his article on "continued fever," says, "The difference is very striking between the kind of fever that I witnessed in London for ten years before the arrival of spasmodic cholera in this country and the kind of fever that has since prevailed, and is now (1838) so rife around us. During the first of these periods the antiphlogistic regimen was indispensable in the outset of the disease; in most instances bleeding, either general or topical, was required, and well borne; this was an inflammatory phase. The present epidemic offers a marked contrast in all these points. We are taught by experience to refrain as much as possible from blood-letting. The typhoid is now the prevailing type. You might almost, I say, suppose that I had been speaking of two distinct maladies. Moreover, *all acute diseases have assumed, within the last ten years, in this town at least,* an unusually *asthenic* character." Lectures, Blanchard and Lea's edition, 1855, p. 947. At page 959 he says: "You have heard me state already, that whereas the fevers which occurred in London for some time previously to the year 1831 or 1832, not only bore, but required the abstraction of blood in some way or another; since that period, and especially since the epidemic cholera visited us, it has been necessary to abstain, whenever we could with safety, from taking blood at all."

So far from the excellent authors above named being entitled to the ridicule attempted to be cast upon them by this reviewer, I believe that their treatises upon inflammations and fevers will stand the test of all time, and in no respect will be found more

sound than in the judicious and discriminating views which they have promulgated upon the subject of bleeding. Nothing can be more accurate and clear than their counsel upon this subject, and the careful discrimination which they make between the types and forms of disease, and the remedies adapted thereto.

The reviewer relies very much upon evidence furnished by reports of the success of bleeding and tartar emetic in the treatment of pneumonia in certain large European hospitals in 1835 and 1839. I do not give much weight to these reports, first, because in 1835 and 1839 the adynamic type of disease was rapidly gaining ground in large cities especially, (witness Mr. Watson,) and the more so in large hospitals, and secondly, because the treatment of disease in large hospitals is often too much of a perfunctory character.

That modern physicians should deny the correctness of the practice in inflammatory diseases of those able and talented men that have preceded them, because the cases that they now see do not bear the same treatment, reminds me of David Hume's argument against the truth of the miracles of the Bible. He argued that they were utterly incredible, because they were contrary to human experience. That is, they were *contrary to his experience*; he had not witnessed them; but were they contrary to the experience of the generations that lived in the days of their alleged performance?

It is said that the forests of this part of the country were formerly inhabited by panthers, bears, wolves, deer, and rattlesnakes. But now we have nothing of the kind; nothing larger nor more ferocious than foxes, coons, and opossums. Shall we say that our fathers were mistaken in this matter? that nothing larger nor more ferocious than a fox ever did inhabit them?

During the transition period in the type of disease above alluded to, I experienced some most mortifying failures (as many others have done, and will ever do), from mistaking cases of high irritative fever for inflammatory cases. They mostly consisted of violent attacks of malignant scarlet fever without eruption. Bleeding proved immediately fatal. I will venture this prophecy,

viz., that some time in the future (it may be in twenty, or fifty, or one hundred, or two hundred years) diseases of the purely inflammatory or sthenic type will again become the order of the day. When that time comes, woe be to the practitioner that abhors the lancet!

Post Script.—Let me beg that the reader, in justice to the writers and practitioners above alluded to, will consider carefully the following passages of a few of them. Hundreds of others of a similar character might be pointed out, but let these suffice.

1st. Eberle's Practice of Medicine, Philadelphia, edition 1831, pp. 104 to 107, vol. 1, on treatment of remitting fever, and pp. 139 to 144, on treatment of common continued fever, or synocha and synochus; also, last paragraph, p. 150; and pp. 289 to 291, on treatment of pleurisy and pneumonia.

2d. Watson's Practice, Philadelphia, 1855, pp. 143 to 149, and 970 to 971.

3d. Wood's Practice, Philadelphia, 1850, vol. 1, pp. 224 to 227, and 292 to 293, and 355 to 357.

Now, I state with all the solemnity of one sworn on the Holy Evangelists, that in a thousand instances or more, I have witnessed the perfect accuracy of these writers, both in their descriptions of disease and the correctness of the practice prescribed.

I offer this to the candid consideration of the reader as some offset to the sweeping, most reckless, and irreverent denunciation by the reviewer when he says, "The ancient worthies butchered their victims; modern physicians heal and bless them." I will guarantee that the author of that remark had no acquaintance personally with diseases previous to the year 1840, and probably not before 1850 or –'55.

These ancient worthies testified to what they saw, and modern physicians testify to what they have seen; and doubless the testimony of both, as a general thing, is worthy of all regard. That the science of medicine has made immense strides in the

last forty years, we all know; but let not the modern physician plume himself too much on that, for I do not doubt that if the diseases of former days were suddenly to come upon us the modern would find himself as much at a loss as the ancient worthy would be, who might suddenly awake from a Rip Van Winkle slumber.

ART. III.—OVARIOTOMY IN ENGLAND. READ BEFORE THE LOUISVILLE OBSTETRICAL SOCIETY February 18, 1871, by S. BRANDEIS, M. D., Louisville, Ky.

Dr. Paul Grenser, who is highly distinguished by his publishing the latest and most improved edition of Professor Naegle's Hand-book on Midwifery, has made a trip to England for the purpose of studying the radical treatment of *ovarian* cyst, and from his report we abstract the following interesting facts:

During a sojourn of six months in England, Dr. G. has witnessed 20 operations for ovarian tumors, of which 16 were completed, while 4 remained uncompleted. Of that number 5 were made by Thomas Keith, 1 by James Simpson, Spencer Wells 12 (6 in Samaritan Hospital and 6 in private practice), Murray 1, Graily Hewitt, 1. From the 16 completed cases 4 died; from the non-completed cases 2 died.

Keith and Wells work both very systematically; they use Spencer Well's note-book on ovarian and abdominal tumors, and report their cases with the greatest accuracy. In this little note-book, twelve pages are devoted to the anamnesis (or previous history), the present state, and diagnosis; four pages to the report of the operation, and the balance to the history of the after treatment. The anamnesis embraces besides the usual questions, hereditary disposition, the earliest signs of the disease, the mode of life, and the influence of habitation upon the

development of the disease, its subjective and objective symptoms; by it is also investigated whether signs of inflammation, suppuration, or rupture of the cyst, have become manifest. For the investigation of the *present state* of the patient particular attention is paid to the general condition of the catamenia, intestinal canal, the urinary organs, and nervous system; upon which follows the real objective examination. This comprises, first, the measurement around the umbilicus, then its distance from the symphysis pubis, the zyphoid cartilage, and the right and left antero-superior spine of the ilium. Next follows the inspection of the abdomen, and finally percussion and auscultation.

Percussion is specially important for the differential diagnosis between free ascites and encysted tumor. Not speaking of the change of posture, Grenser calls attention to a special deception. One will meet with cases with a great collection of free fluid, in which percussion will furnish the appearances of encysted fluid, while the presence of a cyst cannot be distinctly established. In such cases, of which Grenser has seen two cases in Mathew Duncan's clinic, in Edinburgh, the so-called profound percussion removes all doubt. If, namely, the plessimeter is pressed down deeply, we will meet with a distinct tympanitic sound, where, previously, the sound was flat and dull, which former will disappear as soon as one percusses superficially. This phenomenon is explained by the shortness of the mesentery, which does not permit the intestines to float upon the surface of the fluid, by which arrangement a portion of the fluid intervenes between the intestines and the abdominal walls; this will give a dull sound on percussion, disappearing forthwith upon depression of the plessimeter, the intestines being then percussed. The shortening of the mesentery can either be natural or pathological, as the result of previous inflammation, in which case the intestines are drawn towards the spine.

Palpation and the discovery of fluctuation by succussion throw light upon existing irritations of the peritoneum, and likewise upon the consistency of the contents of the tumor. The sensa-

tion of crepitus belong likewise under this heading. If crepitus is felt over various places, it shows that the tumor can be moved and shifted, and is consequently not adherent. Altogether crepitus, or rather friction sound, has lost its great importance as a diagnastic, as the existence of adhesions to the abdominal wall are of no great influence upon the operation.

The discovery of fluctuation throws light upon the nature of the contents and the structure of the tumor (as to its being *unilocular* or *multilocular*), but for the diagnosis of an ovarian cyst, it is of only subordinate importance, if other conditions are confirmative; such is the case with tumors with semi-liquid (jelly) contents and multilocular tumors.

Auscultation furnishes results of little importance, even though crepitation, or friction sound can be heard. In order to establish the mobility of the tumor the patient is made to take a long breath—if the tumor is not adherent, the abdominal muscles can be seen gliding over the tumor, while if it is adherent, it will either interfere with the movement of the muscles or will move simultaneously with them. If the patient is made to sit up, the abdominal muscles bulge forward if the tumor is free, which will not be the case if the tumor is adherent. But again, there are instances in which the cyst may have very thin walls and very fluid contents, and if adherent may be pulled upward with the abdominal muscles; the last test is therefore not very reliable.

For the distinction between an ovarian and uterine tumor the sound is used.

In regard to the length of the pedicle, the high standing of the tumor and its mobility is decisive, on the contrary, if it is deep-seated and immovable, it is presumed that the pedicle is short, and the tumor adherent to the pelvis. Keith believes that he is able to decide as to the length of the pedicle by introducing one finger into the vagina, while the others are placed over the symphysis, and moving the uterus from the outside.

To determine which ovary is diseased, whether the right or left, is thought to be of little importance. As the puncture is

the last means of diagnosis, it is resorted to if large amounts of free exudation obscure the field of investigation. For that purpose, it is not the trocar, but the lancet which is used; it is thrust in the linea alba, either above or below the umbilicus; into the opening thus made, Wells introduces a silver tube with a rubber pipe, which carries the fluid into a vessel; the silver tube has a conical extremity and is long enough to serve at the same time as a probe for the abdominal cavity.

As to the prognosis, it is the rule to perform the operation so long as there is a prospect of accomplishing it—this is the point of foremost consideration; the general condition of the patient is of less importance, the operation having been successfully performed in the most desperate cases and on decrepid subjects. The only kind of cases which are not fit for the operation, and which will always prove fatal, are those with adhesions to the vessels of the pelvis and Douglas' space; in such cases Wells and Keith do not operate, but adopt a palliative treatment. It is desirable that some improvement for the unfinished operation may be suggested.

As to the time for the performance of the operation, English surgeons differ, some operate early, others late, and a few postpone it to the last.

Baker Brown operates as soon as the diagnosis is established, upon the presumption that with the longer duration of the disease, changes in the cyst and peritoneum are apt to occur, which may increase the danger of the operation.

Keith prefers to postpone the operation until distinct emaciation of the thorax is evident.

Spencer Wells and Thomas Bryant (who up to the end of 1866 operated in twenty-eight cases with seventeen cures) postpones the operation still longer.

Wells persuades his patients to undergo the operation after they cease to be able to walk one mile without difficulty.

Bryant decides for the operation as soon as the tumor, by its size, molests the patient, interferes with her comfort, her ability to perform her domestic duties and participate in the enjoyments

of life, the general health fails, and the local effects of the disease become insufferable.

Greenhalgh wishes to postpone the operation as long as it is justifiable, for the reason that by the longer duration of the disease the peritoneum may undergo such changes as to render it less vulnerable, and diminish the danger of traumatic peritonitis.

Grenser supports the views of Keith and Wells. The *puncture*, before the operation is recommended in cases accompanied with œdema of the abdominal integuments and lower extremities, is intended to relieve the great tension of the same, to establish a free circulation, and render the wound more apt for union. It should precede the operation one or two days. For the real operation, a room as light and as large as possible is selected; it should not be overheated; but one window is kept open all the time.

The patient is dressed in a plain shirting chemise, with a flannel gown; the lower part of the body is covered with a large India-rubber sheet, with an opening sufficiently large to expose the tumor; a warming bottle is placed at the feet, and the legs are fastened to the table with a strap.

The incision is made in the linea alba between the umbilicus and symphysis about ten centimetres in length; this answers every purpose if the cyst is free anteriorly, but if it is adherent to the abdominal wall, there is danger of tearing the peritoneum from the fascia. Wells will, in such cases, work in small cuts with the aid of an Adams' hook; he tries to empty the cyst early, which is sometimes done at the first incision. The division of adhesions will require the greatest care of the operator, and consumes a great deal of time. Adhesions with the omentum, if lacerated, give rise to severe hæmorrhage. Wells suggests the ligation of the omentum in several places, with subsequent excision of these portions, instead of ligating all the bleeding vessels, which is a very tedious work, and is attended with loss of a great deal of blood. Bleeding places of peritoneum, either parietal or intestinal, are either closed with serres-

fines or twisted and ligated, for which purpose Wells uses ordinary silk; Keith, silk saturated with carbolic acid; and Brown, wire. If the ligatures are near the incision they are kept in it, if not, they are cut off short. Baker Brown likes the application of the actual cautery in such cases. The adhesions are sometimes so extensive and vascular that the operation cannot be performed without risk of injuring some vital organ and producing serious hæmorrhage; in such cases the operation has to be be kept uncompleted.

Cleaning of the abdominal cavity before closing of the wound is the chief necessity for securing a happy result.

Keith introduces some sponges immediately after the extraction of the cyst; these absorb all the fluid which may have escaped into the cavity, and take up all the fresh blood while the bleeding vessels are being ligated. Finally, it is absolutely necessary to pass a sponge down into the small pelvis, in order to be sure that everything is dry there. The latter proceeding is endorsed by the majority of surgeons, but Baker Brown prefers to leave inside what he cannot scoop out with his hand or a piece of flannel, rather than irritate the peritoneum with sponges. Wells uses dry linen to absorb the fluids during the operation; for the removing the fluids from the abdominal cavity he uses, if possible, new sponges.

The management of the pedicle varies according to the individuality of the case. The *burning*, according to Baker Brown, is applicable in every case. The clamp is not uniformally commended, and will have to give room to better methods. The leading principles in the application of the clamp are the following: Above all things, it is a comfort to the operator to have free access to the stump, which is so often the source of fatal hæmorrhage, particularly in cases of the vascular kind; further more, one prefers to secure a frail stump, and not include the same in the cavity. The length of the pedicle will, in such cases, be the guide. Wells and Keith like to use the clamp if the pedicle is long enough. With a short stump there is danger of

dragging the peritoneum or the intestines, which may effect a strangulation.

Wells' principal objection against the *intra*-peritoneal method is the fact, that in nearly one-half the cases a menstrual flow is established from the stump for nearly six months, which might give rise to an hæmatocele. Clay, of Manchester, ligates the stump, permits it to drop into the cavity, but retains the ligatures in the wound.

Tyler Smith ligates the stump; cuts the ligatures short, and drops all into the cavity. Of three cases thus treated, Grenser saw one only recover.

Baker Brown divides the pedicle with the actual cautery. In forty-six cases treated by this mode, five terminated fatally. He had a special clamp constructed for the purpose, upon which the cautery is applied, and which is removed immediately afterwards. Frequently one has to ligate bleeding vessels of the stump before the same is permitted to drop in the abdominal cavity. Wells carries a needle through the stump after ligating it, and in this way retains the same in the wound; the dragging is by this mode rendered less than by the use of the clamp, but gangrene of the stump frequently results from it.

Each of these methods has its special advantages in individual cases; one has to be prepared for all methods in ovariotomy, and to have a quick and safe judgment at the decisive moment. Keith and Wells had better success with the clamp than with any other method.

The stump cared for, and the cleaning of the abdominal cavity properly attended to, the closing of the wound is now proceeded with; this is done by deep and superficial sutures, either wire or silk. Keith and Wells include the peritoneum, which Baker Brown objects to, fearing suppuration of the latter. The wound is now dressed with lint, the stump touched with sesquichloride of iron, the abdomen strapped with adhesive plasters, and finally bound with a flannel band. The patient is now placed in a well-warmed bed, and the greatest rest and solitude enjoined. In this manner the operation is brought to an end; but many

circumstances are apt to occur, which may prohibit a continuance of the same; the operation must then be left unfinished.

This is indicated if adhesions with the bladder, the jejunum, colon or pelvis are discovered, an accident for which art does not yet provide a sufficient remedy.

Wells, for such cases, suggests the following method. The cyst is to be emptied as much as possible, all septa destroyed, so that all the fluid can escape; then the anterior wall of the cyst is attached to the abdominal integument by carrying sutures through the same; in the lower corner of the wound he introduces a drainage tube, expecting that by this means the cyst will empty itself and suppurate, the matter be discharged through that opening, and the wound finally heal by adhesion. This theory may be correct, but it is to be regretted that too frequently a fatal peritonitis will be developed, or the patient will sink from profuse suppuration—*cures are very rare.*

In other cases the cyst is punctured, a portion of it excised, bleeding places ligated, the abdominal cavity thoroughly cleaned from all fluids, and the wound closed.

Wells, in an appendix to his three hundred cases of completed ovariotomy, publishes seven cases of uncompleted operations, of which three recovered, three died, and the seventh died a few weeks after. Baker Brown reports eight cases, of which seven died. Keith had one successful case, the patient enjoying perfect health two years afterwards.

The *explorative incision* is looked upon in England as a scientific and legitimate operation whenever the presence of a cyst and its easy removal are probable. When one of the cystiform fibroid tumors is discovered, the surgeon contents himself with puncturing; occasionally a drainage tube is introduced, and frequently nothing is done, the abdominal cavity being carefully cleaned and the wound closed.

The results of this operation are far more favorable than after uncompleted ovariotomy. Wells met with seven cases of that kind, of which five recovered; Baker Brown, likewise, seven cases,

of which four recovered; in fourteen cases only five terminated fatally.

The *after treatment* demands the most perfect ventilation of the room; this is looked upon as the principal requirement. Even in the winter months, January, February, and March, Wells' patients were lying with the window open, the bed itself protected with a screen; the window covered by a curtain. In favorable cases scarcely any febrile excitement follows. In the first hours after the operation more or less pain will arise, which is met with opium. Very delicate women receive the same with brandy. Beef-tea is administered frequently; all this is, on the first day, introduced by the rectum.

Wells and Keith fear nothing more than the vomiting following upon chloroform; hence Keith uses ether as an anæsthetic, while Wells uses methyl bi-chloride, a combination which contains an equivalent less of chlorine than chloroform. The drug is administered with an atomizer, the face being protected with a mask, beneath which the patient receives the anæsthetic either pure or mixed with air.

Simpson and Baker Brown give chloroform; the subsequent vomiting they control with ice and carbonic acid. Keith gives hot water with good results.

The treatment of the wound is very simple; if the secretion is very profuse the adhesive-plaster is cut in two after twenty-four hours, fresh lint applied, and everything closed again. Union is generally established by first intention. Silk sutures are left in for seven or eight days without irritation; the stump becomes completely mumified by the daily application of the sesquichloride of iron. The clamp generally drops off after seven or eight days, leaving behind an ulcer, which heals within three or four weeks. Patients in whom the intra-peritoneal method is adopted recover faster.

Circumstances which will retard recovery are deep ulceration and prolapsus of the stump (which acquires the shape of a mushroom), and abscesses of the abdominal integuments. If not specially demanded by circumstances, the bowels need not be

attended to before the eighth or tenth day. If the strength of the patient permits, she may leave her bed about the tenth or fifteenth day, and after four weeks she leaves the hospital to go to the country. Before leaving, she is provided with a good abdominal bandage, which is worn for six months, in order to prevent ventral hernia.

Unfavorable cases are either followed by peritonitis, which generally terminates fatally, or patients sink about the third or fourth day under the symptoms of septicæmia. The treatment is restricted to the administration of narcotics and roborants, beef-tea and brandy.

A careful searching after the cause of disease may frequently give the surgeon a chance to rescue life, it being sometimes the case that a collection of pus accessible to the knife or trocar is discovered, and the free opening of this will save the life of a patient; finally, if the stomach cannot retain anything, narcotics and nutriment can be administered per rectum.

The *post mortem* frequently shows the wound about the third day to be united both externally and internally. The sutures internally covered with plastic exudation, and a portion of the peritoneum or intestines agglutinated to the same.

In conclusion, there are presented some statistics in regard to English operations for ovariotomy, with their results.

NAMES OF SURGEONS.	Number of operat'ns.	Recoveries.	Deaths.	Percentage of recovery.
1 Clay - - - - - - - -	210	138	72	65,76
2 Baker Brown - - - - -	120	84	36	70,01
3 Spencer Wells - - - - -	300	215	85	71.66
4 Thomas Keith - - - - -	87	72	15	82.73

The reason why English surgeons surpass all other nations in the results obtained in ovariotomy, Grenser believes to be found in the easy and quiet temperament, with the hardier and better-nourished systems of English women; the proper selection of the locality; rooms well ventilated, on the second or third story,

remote from patients with serious ailments; the great variety of precautionary measures; the superior operatic skill and manipulation; and nurses well trained for the work.

As a proof that the operations performed in the London hospitals do not furnish as good results as those in private practice, the following table, taken from a Swedish work, will clearly demonstrate:

HOSPITALS.	Number of cases.	Recoveries	Deaths.	Percentage of mortality.	Name Surgeon.
St. Bartholomew's - - - -	12	4	8	66,67	Mr. Willatt,
Middlesex - - - - -	8	1	7	87,50	Dr. Hall Davis,
King's College - - - -	7	1	6	85,75	Dr. Priestly,
St. George's - - - - -	7	2	5	71,73	Dr. R. Lee,
University - - - - -	5	1	4	80,00	Mr. Erichsen.
Total - - - - -	39	9	30	76,92	

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—ON THE CONDITIONS OF DISEASE DEMANDING ABSTRACTION OF BLOOD. By BENJAMIN W. RICHARDSON, M. D., F. R. S., London.

Gentlemen,—Medicine is never so satisfactory in matter of practice as when she combines theory with practice, and when, in respect to results, both are in accord. When theory explains what ought to follow upon certain methods of treatment, and when practice confirms the treatment as of sterling worth, the mind of the practitioner is at peace. He knows in what he believes, and acts, whatever may be the exceptional result, with a consciousness that he is following a rule which, on the whole, is beneficent and trustworty. Our forefathers in physic were

weaker than we are, because they had not our advantages in theoretical study. They observed the phenomena of disease as we observe, and recorded them so faithfully and with such true delineation of nature that they leave little for us to do in mere description, nothing that can excel their own. The remedies they employed they also described with infinite care, and the effects of the remedies, in so far as they were able to form a judgment, were written with the most simple honesty. But at these points they stopped; if they endeavored to account for the cause of a disease or the action of a remedy, the *modus*, they fell into a train of reasoning tinctured by the philosophy of their time and inexplicable now. We, more fortunate, are improving in theory by the better light that flows in upon us from modern philosophy; and so we are able to advance, as they never were, towards knowing not only facts, but the why and the wherefore of facts—a signal advance.

In the matter of bloodletting, our forefathers were great in facts, and I have tried, in a former essay, to accord to them some of the credit that is their due. By their facts the majority of the medical world, even one generation ago, firmly held. At length new theory, very imperfect of its kind, and assuming too much, threw doubts on some of the facts, and thus the practice of drawing blood fell into disrepute, its faults grossly exaggerated, its virtues ignored and forgotten.

We return, however, to the fathers once again. We are forced to acknowledge that, after all, they held in bloodletting a powerful means of cure; we are driven to accept that the remedy was based on correct observation; and we are driven, further, to the conviction that, by omitting to use this remedy, we moderns often let patients die who might live and be cured.

My lecture of to-day is offered as an attempt to treat with this conviction. Not one alone of medical men, but many, have spoken to me upon it with compunction. We read, they say, what you and others have written on this remedy of abstraction of blood; we accept much you have said, but we cannot act as we would, even when we know a case must end fatally,

because we have no clear rule for bleeding, nor connected theory on which to rest. You should define more clearly. Well, to-day it is my wish to define, not with dogma, but with reason—reason in which practice and theory go hand-in-hand harmoniously.

THEORY.

Let us endeavor, first, to learn the theory of the practice of taking blood. What physiological changes occur in the body when blood is being abstracted—in what way are these changes likely to influence function? And, that we may have no confusion of thought, let us, on the present occasion, treat only of abstraction of blood directly from a vein.

In tapping a vein, then, and allowing blood to flow from it, we should bear in mind that the venous channel we have opened is not simply a blood-course, but a reservoir of blood; a reservoir from which the right heart lifts up, at each stroke, a column, and pours the charge into the lungs. It makes some considerable difference from what part of the reservoir we take our blood; if we take it from the arm, we draw at first from that section of the reservoir from which the blood proceeds—the hand and arm—and we affect the other parts of the body little; if we take it from the jugular vein, we draw direct from the brain, and very quickly interfere with nervous function; if we take it from the foot, we affect more slowly than from the arm, and much more slowly than from the neck. These facts were well known to the ancients, who, accordingly as they wanted a quick, or moderate, or slow deliquium, bled from the neck, the arm, the foot.

After a time there occurs, under the abstraction, a central change of the circulation; the volume of blood pouring into the heart is diminished at the right side of the heart; thereupon the volume of blood passing over the pulmonary circuit is diminished, and the first symptoms are, unsteady breathing, attended usually with sense of oppression, and desire for air; the balance of the respiratory and circulating systems is disturbed, the pressure of blood in pulmonary circuit is reduced, and ex-

haustion would now soon follow, but for a new change that takes place; the venous reservoir begins to be fed more freely from its tributary sources. We find, if we tie the aorta of an animal just dead, so that no blood can make its way from the arteries into the veins, that for an interval of three, four, and once I knew five minutes, there is an influx of blood into the right heart under the mere motion of its auricle. The venous reservoir, bereft of its supply by the arteries, is filled for a time by tributary currents, by influx of water, by influx of chylous fluid, and by influx of returning blood from the great glandular organs, such as the liver and spleen. Thus the reservoir becomes filled up, not now with simple blood, but with blood containing specially an excess of water. Under these circumstances the blood from the vein becomes of darker color than is natural, precisely as this bright arterial blood before me becomes dark when, as I now do, I infuse into it a little water. At this stage of the operation the blood shows, also, an increased tendency to undergo coagulation; precisely as this blood before me, in which the fibrine is held in solution by the addition of a salt, shows quick tendency to solidify when I simply infuse water into it. The reason of this is that the influx of water disturbs the balance between the saline parts of the blood, fibrine and water, which is necessary for maintaining fluidity. The blood receiving more water than the salts can remove in due quantity, the fibrine tends to pass into the solid form, to coagulate. Thus sometimes there is a sudden coagulation of blood during this stage of bloodletting in cases where the fibrine, already in trembling equilibrium, is ready, under very slight disturbance, to solidify. A stage little further on, and the blood from the vein ceases to begin to flow, the heart becoming enfeebled, and fails to take up with sufficient force from the venous reservoir the fluid contained in it, and the blood itself loses in sustaining power. Then the evidences of syncope are manifested, lividity passes into pallor, the controlling nervous centres are paralyzed, the volitional centres are paralyzed, and there is deliquium. The deliquium does not, as a rule, pass into

death, however, because the heart, though it contract feebly, continues in motion, and if the loss of blood be stayed, soon recovers itself; indeed, if the bleeding be continued, the heart continues to contract after the respiration has ceased, and I have seen this day, in an animal that died from actual loss of blood, the heart rythmically acting for ten minutes after death. We have here the same phenomenon as that which is observed after death by chloroform; and the cause of the phenomenon is that the heart first feeds itself with blood by the coronary vessels, so that it is the last organ of the body that is exhausted, and consequently the last to die. But for this provision every case of syncope would be a case of death.

In this period of temporary suspension of the common phenomena of life there is, as we know, complete collapse of voluntary power; there is also such perfect loss of sensibility that the late Dr. Wardlaw, before the days of anæsthesia, once bled a lady to insensibility, and while she was unconscious, amputated her breast. But soon, should the loss of blood continue, and perhaps should it not continue, there is another symptom added—I mean irregular and severe convulsion. This convulsive action is a definite phenomenon, and it may be seen in the slaughter-house in every animal that is killed by simple loss of blood. It appears invariably at a given moment during loss of blood, it lasts a regular time, and it ends in complete cessation of muscular motion. When we analyze the phenomenon of the convulsion we find that it is simply due to loss of nervous control over the muscular system. The nervous system is dead, and is, as it were, broken off from the muscular system; but the muscles retain their power to act and persist in action, the flexors against the extensors, the extensors against the flexors, in uncurbed restraint, until both are reduced in power. Still, the muscles retain long what is called their irritability, and if supplied with saline solution, in current, remain active, under stimulation, for two and three hours after death if their temperature be kept low. We have before us proof of this. Here is an animal that died two hours ago; from it every portion of the

blood that could be extracted was extracted. We insert now in the aorta an injecting tube, and throw round the arterial vessels, into the muscles, a weak solution of common salt, and under the stimulus of electricity you see the muscles again so active that the limbs are moved freely. These muscles are not dead, and if we could re-connect them with their nervous centres, and restore the nervous power, we could call up a resemblance at least of actual life.

Baron Liebig, in a recent admirable lecture (translated by Dr. Paul, in the *Pharmaceutical Journal*), has called particular attention to this effect of a saline solution in restoring muscular irritability after death, and has adduced in illustration an experiment made on frogs, in which, for several hours after the natural circulation of blood has been cut off from the animal, the muscular motion has been sustained by the injection into the arteries of common salt and water. He has further adduced an observation, by Professor Agassiz, of a wounded shark that lived for a long time on the sea water which had found its way into the circulatory channels of the animal. But we have had better observations even than these in the practice of medicine; for in cases of serous hæmorrhage, cholera, in the human subject, we have had instances abundant in which, after the apparent collapse of death, after cessation of motion, sensation, and other signs of life, the introduction of saline solution by the veins has restored animation. In like manner, in collapse from direct loss of blood, the same restoration of motion has followed transfusion. Again, in some experiments of my own on the bodies of warm-blooded animals that had lain dead in the air at a temperature below freezing point, it was found that so long as three hours after death active muscular motion could be excited by simply injecting water, without salt of any kind, at a temperature of 115° Fahr.; while in a turtle that had been killed by decapitation in the usual way, I once found the muscles of the head, that had been kept at 32° Fahr., contracting vigorously, under mere mechanical stimulus, eighteen hours after they had been separated from the rest of the body.

The evidence, then, is conclusive that, after loss of blood to and beyond the stage of convulsion, the muscles retain their power to contract; they retain it much longer. I may say, under this condition than when they are left full of blood, and they begin to react so soon as they are re-charged, even after prolonged absence of blood. The heart, also, with the other muscles, retains its power, and, as it is most readily re-supplied with blood, continues to act during deliquium, and maintains the life. In the days when to bleed from a vein was a practice followed by every busy practitioner every day, syncope from bleeding was an event of the most common kind; but death from the syncope thus induced was almost unknown.

There has been some difference of opinion respecting the temperature of the body during loss of blood. From the observations I have made in the cases of animals bled to death in the *abattoir*, I was led to infer that through the whole process of abstraction of blood there was lowering of temperature. But this view has been opposed, and it has been affirmed that there is sometimes an increase of temperature during loss of blood. I have on this point some notes recently made by my friend Dr. Day, of Stafford, who has observed the effect of abstraction of blood in a calf that was bled, as is the custom in some parts of England, on two days previous to slaughter of the animal. In this instance, the temperature in the rectum remained on both occasions unaffected, but in the mouth it underwent decided reduction. Dr. Day has also taken observations in two cases of accidental hæmorrhage in the human subject, in one case of post-partum hæmorrhage in the human subject, and in one case of excessive internal hæmorrhage occurring during typhoid fever, also in the human subject. In the cases of accidental hæmorrhage, the temperature in the axilla and the mouth was reduced 1½°; in both these instances there was recovery. In the cases of post-partum and of internal hæmerrhage, there was decline of temperature to nearly 2° up to the moment of death (both being fatal cases); but in both, at the moment of death, there was a suddenly-developed increase of temperature. This fact of *post*

mortem rise in temperature, on the cessation of the movements of the heart and of the muscles of respiration, has been observed after death by cholera and other suddenly exhaustive diseases, and has been before us in a previous lecture. Its occurrence in cases of hæmorrhage may have led to the difference of opinion that has been expressed respecting the effect of hæmorrhage by other observers. I do not, however, think the fact in any practical way influences the question we have now in hand; and from evidence we have before us we are, I infer, bound to accept, until other and very decided proof has been given to the contrary, that during loss of blood the temperature of the body is reduced.

We may sum up the physiological effects of abstraction of blood under a few heads. There is, *firstly*, modification of the balance of the circulating and respirating systems; *secondly*, influx of fluids into the venous reservoir from the tributary supplies; *thirdly*, hydration of the colloid fibrine, and dilution of the saline parts of the blood, leading to tendency to separation of fibrine; *fourthly*, syncope; *fifthly*, convulsion of the muscles from removal of nervous control, with retention of the muscular irritability; and, *sixthly*, decline of animal temperature. From these facts we may turn to the application of bloodletting in cases of disease, and may ask, and try to answer the question, What are the conditions of disease demanding the abstraction of blood?

THE PRACTICE.

In considering the practice, the first thought is that those effects of bloodletting, which might be expected to be useful, are such as may be called mechanical effects: in plain, whenever the venous reservior is under distension, so that due motion of blood and of function of part depending on motion of blood for function is disturbed, abstraction of blood is the most direct remedy. We will consider these cases.

Cases of Lightning-Stroke.—The experience of many observers on the efficacy of venesection in cases of lightning stroke is en-

tirely in support of the value of this remedial measure. In my lectures on lightning-stroke, I have recorded a case in which a man who had been rendered insensible by lightning was bled in the freest manner, the consciousness returning during the bleeding, and the recovery being secured. The older men in physic, who always opened a vein in such cases, were apparently clear as to the importance and success of the practice; and within the last year I have had some experiences which in the most singular manner confirm this practice. From an observation made by Benjamin Franklin—that the most humane and rapid mode of slaughtering animals for food would be by a powerful electrical discharge—I was led to try if this really were a practical suggestion. I therefore had sheep taken to the Polytechnic Institution, and had them killed by a discharge from the great battery there. I found that full-grown sheep could be fatally and instantaneously struck down by the discharge from a surface of a Leyden battery of ninety-six feet. But here came the curious fact: when animals struck in this manner were laid on the bench after the shock, apparently dead, and actually dead if let alone, they would show the most convincing evidence of recovery if they were instantly bled freely from the neck. After the blood had flowed for a little time, the animals began again to b reathe; they struggled as they do when they have not been struck, and they became so distinctly conscious that I had to give up the notion of recommending any change in the present mode of slaughter. In another case, where a smaller animal was struck down and rendered apparently lifeless, the opening of the external jugular vein was followed by a gush of blood, by immediate return of the respiration, and rapid recovery.

The *rationale* of the treatment in these cases is most simple. The effect of the lightning, or of the electrical discharge, is to create expansion of the contents of the venous reservoir; there is liberation of gases from the blood; distension of veins in all parts; pressure on the brain in the closed cavity of the skull, and insensibility as the result of the pressure; distension of the right side of the heart, so that muscular structure is paralysed;

and temporary cessation of all motion and function. The opening of a vein at once relieves all this embarrassment; the heart is set at liberty to recommence its contractions; the nervous centres governing the process of respiration are relieved; and, if the derangement of the animal mechanism does not extend to actual disorganization of blood, or to severe rupture of organic structure, when no remedy would avail, the natural functions are restored, and life is saved.

I take it, then, that in cases of insensibility from lightning shock, or electrical shock, the abstraction of blood by venesection is demanded.

Sun-Stroke.—In sun-stroke the conditions of disease are closely analogous, if not identical, with those induced by lightning. One of my earliest experiences—an experience that has made me hold to the thoughtful practice of bloodletting—had reference to this disorder and its treatment. A man was carried from the harvest-field to the residence of a surgeon, a relative of mine, insensible from sun-stroke. The patient was carried in like a dead man—unconscious, powerless. He was livid, but breathing at intervals, and there was still some audible motion of the heart. The surgeon, one of the school of Clive and Astley Cooper, and one who had no doubt as to what was the right thing to do, acted promptly. "He will recover if we can only get blood," was the remark to me; so the man was held up by his mates in a garden chair, a fillet was put round each arm, and a vein was opened beneath each fillet. At first the flow of blood was slow, though the veins everywhere were distended to the utmost, then the stream became more determinate, and at last copious, and the result was that in five minutes the man was breathing freely, was becoming conscious, was recovering. He was simply cured straightway, was able to assist himself to walk away, and without any other touch of medical treatment, was restored to full health in a few days.

I urge, then, that in cases of severe sun-stroke, when the venous reservoir is under extreme distension, when the large tense veins offer themselves, I had almost said, to the operator, there

is a condition of disease demanding abstraction of blood. In America this fact seems now to be recognised, and the practice of bleeding founded upon it, in so far as it has been carried out, has been most successful. In England, at this time, the practice is lost, and case upon case, during the heat of summer, is registered in the returns of mortality as death by sun-stroke, in which virtually nothing has been done at all to promote recovery; nothing, I mean, that is likely to be successful. Mustard, perchance, is applied to the limbs, cold to the head, a blister to the nape of the neck; a purgative, if the patient can be made to swallow it, is put into the stomach, or an injection is administered by the rectum. Of what avail these slow, these almost meaningless measures? By the side of the grand old remedy they are trifles, having neither theory nor paractice to sustain them.

Cases of Mechanical Shock.—The teachings of the writers of twenty-five years ago, when the reaction against bloodletting set in, told greatly and effectively against the abstraction of blood after mechanical shock. It was teaching diametrically opposed to the learning and observations of centuries, but it had its way, and it has been generally adopted. It is, perhaps, not altogether bad teaching, but is is certainly too sweeping. Mechanical concussion differs from lightning-stroke and from sun-stroke, in that it does not increase the tension of the venous blood. It paralyzes the muscular system through the nervous system, and it is probable that after such paralysis it were best to endeavor to restore by the application of warmth and the administration of a stimulant, rather than by abstraction of blood. I would not, therefore, put forward bloodletting in such instances, although, at the same time, I cannot conceal the suspicion that, in some cases, the old men were right in trying to bleed. It is certain enough, from the history of surgery, that the fathers of our art, coming to persons who had been apparently so stunned as to be, to common observation, dead, were successful in restoring motion of blood through the vessels of the body by drawing a current of blood from an open vein. I do not press

the point, however, because we have in these days no evidence to guide us, except the *litera scripta* of the past. But there is a condition of reaction after recovery from the paralysis of shock which may call urgently for abstraction of blood. In the condition of which I speak, the heart, recovering first from the general shock, pours into the feebly-resisting capillary vessels a full volume of blood, leading to what is called congestion of vascular organs, and to secondary mischiefs resulting from congestion. In these circumstances the pulse becomes resistant, the veins full, the breathing labored, the body hot; while the unconsciousness from the paralysis passes into unconsciousness from coma. Twice, in cases such as I describe, I have seen the abstraction of blood from a vein, until the tension of the vessels was relieved, lead to the most perfect of results; and both theory and practice bring me to the conclusion that this condition is one demanding abstraction.

This same rule would apply to cases of shock following some large surgical operations, and this view is confirmed by Mr. Spencer Wells, who, after the great operation of ovariotomy, has several times taken blood to meet particular and serious symptoms. I asked Mr. Wells to be good enough to give me a brief note on the general results of taking blood in his cases, and thus he writes:—

"As to bleeding after ovariotomy, my conclusions are, that it is most useful when there is *mechanical* cause for suffering, as congested lungs and oppressed heart, or sudden loss of balance between heart and blood, owing to removal of a large tumor which contained large vessels and received a free supply of blood. But when we have true surgical fever to deal with, which I suppose is either septicæmia or pyæmia, or one of the two opposed conditions of excess or deficiency of fibrine—and I think we are making out the different forms of fever with which these different blood changes are associated—then I have always found bleeding do more harm than good; more than once it has seemed to me to be certainly the direct cause of rapid sinking."

I shall deal with the last point, noticed by Mr. Wells, further on.

Cases of Reaction from Exposure to Cold.—In cases where the body has been exposed to what may be correctly called the shock of extreme cold, we have, during the reaction, a series of symptoms similar to those which follow the reaction after shock from a blow or concussion. We have the same hard pulse, tense vein, congestion. When these cases end rapidly, we usually return them as cases of acute congestion of the lungs. Well, in truth, they are attended, not with congestion of the lungs alone, but of all the vascular organs; and when they do not terminate at once in death, but run what is called their natural course, they pass into conditions of disease—"inflammation"—of some particular organ: lung, kidney, liver, spleen. The ancients were accustomed to bleed in all stages of this condition, in which practice they were, I think, wrong. But there is one stage in which, when they bled, they were essentially right; I mean the stage of acute reaction, before there is any organic change of structure from congestion and from effusion through the distended vessels. To draw blood freely in this stage is simply to cure off-hand. I was taught this lesson of treatment from the experience of a very excellent practitioner twenty-five years ago. I have always followed it when permission was allowed me; I have never seen a bad result from it; I have cured at once by it; and I have seen the worst results from the omission of the practice. It is pitiable to hear, as is constantly heard, of young, strong, active people, who, by accident or surgical operation, might lose blood without any expectation of danger, to hear of such being allowed to die from acute congestion because it is not now the fashion to take the blood (which they might lose by operation or accident without anxiety) for the direct purpose of saving their lives. These are cases, unhesitatingly, in which the conditions of disease demand the abstraction of blood.

Cases of Cardiac Congestion.—There is a class of cases in

which the right side of the heart is dilated and enfeebled, and in which, under some special circumstance, as exposure to cold, excess of food or drink, barometrical change, there is sudden embarrassment of the circulation, oppression of breathing, tenseness of veins, and threatened death. In these cases the veins themselves stand out so fully that you could draw a fair amount of blood without the fillet, if that were desirable; the body is dusky, the eyes injected, the mind restless, the passive oppression intolerable. It happens often in these cases that the patients are advanced in life, or, at all events, are past the meridian, and on this ground a special objection is taken towards "reducing" them by abstraction of a few ounces of blood; so they are treated with stimulants, with sedatives, with chloric ether, with a blister, and in time they may get relief. They get relief by this process—that, out of the obstructed venous reservoir, a certain quantity of fluid passes into the cellular tissue of different organs by exudation, and a certain amount of further organic disease is thus committed. In these cases it is my practice, whenever I can get the permission, at once to relieve the tension of the venous reservoir by the abstraction of a few ounces of blood from a vein. The effects have to be seen to be fully accredited. There is no exhaustion from this process, but a sense of relief from overwhelming oppression; the heart ceases to struggle against the load it could not before lift up; the dusky color of the body clears away, and the symptoms altogether are relieved, we may say practically, at no more actual cost than would follow if the venous reservoir were allowed to empty itself by passive transudation of serum, and with no secondary train of evils derived from exuded fluid in vital organs. I knew a lady who was bled under the condition I have named after her 80th year, and who was always relieved by the process immediately. I classify passive cardiac congestion from enfeebled right heart as a condition of disease demanding abstraction of blood.

Abstraction of Blood in Cases of Apoplectic Coma.—Our predecessors were led in all cases of apoplexy to abstract blood.

They made on this point a hard-and-fast rule, and the people had such confidence in the rule that they insisted on having it carried out. A hundred years ago a surgeon or physician who refused to bleed in apoplexy would have lost caste on all sides, and would probably have been considered guilty of malpraxis. Admitting that our predecessors committed some errors by this hard-and-fast line of practice, they were less guilty of error, I imagine, than we are in this day; for whereas they treated apoplexy and often cured it, we, as a rule, do not in reality treat it at all, but let it take its own course, resorting to a sinapism, a dose of croton oil, or an injection, for the sake of doing something in the right direction, but leaving the case to that most perverse of curers, *Nature*, which, in nine apoplexies out of ten, means that we leave the patient to die.

But suppose there be sudden coma, with or without convulsion, from sudden pressure on the brain, what are the means by which we can hope to relieve? If the pressure be due to exuded serous fluid in the closed cavity of the skull, our object should be to get that fluid back again into the general circulation. If the pressure be due to paralysis of vessels of the brain, or to obstruction to the return of blood from the brain, our object should be to reduce the pressure, and to limit the volume of blood. If the pressure be even from actual effusion of blood, our object should be to expedite the formation of clot, the separation of serum from the clot, and the absorption of the separated serum. Does any one think sinapisms, croton oil, or injections into the rectum, are reasonable measures for these important purposes; or does any one see anything very promising in nature of a corrective kind? Under mere nature, in such cases, as far as I know, the unconsciousness remains, the body becomes very hot, the action of the heart increases in force, the skin and the mucous surfaces exude copiously, the bronchial tubes become loaded with water, the respiration gets impeded from the accumulation of fluid, the body sinks in temperature, with recurring convulsions; and death, in continued unconsciousness of the patient, closes the chapter. Turn around to bloodletting now as the remedy, and

see what it offers. Say we do not always cure by it: Well, is it not better to cure sometimes than never to cure? And what, I repeat, does bleeding offer in apoplexy? It reduces the force of the heart; it reduces the volume of blood; it leads to absorption of serous fluid, if serum be exuded, and it leads to the formation of clot, if blood be exuded. Why, so rational, so purely scientific is the process, that if it had never been discovered, and some one had now discovered it, he—the discoverer—would have been looked on as one of the greatest men of this age of physic!

Turn from theory to fact—and the fact I will give is but one of many in illustration of the harmony that prevails between theory and practice in this matter of bloodletting. Mr. Roberts, of St. John's-wood, called me recently to see a gentleman who was suffering from apoplectic coma, with repeated attacks of convulsions. The patient's breathing was stertorous; his mind unconscious; his volition gone; his body, which had been raised in temperature above the natural standard, cooling; his bronchial tubes and trachea loaded with fluid; his eyes fixed, and his pupils contracted. It was clear that the man must die in the course of a few minutes; but we got permission to draw blood *pleno rivo*, and when about twenty ounces had been drawn, the blood (previously very dark) became brighter in color, the convulsion ceased, and the patient, showing a conscious act for the first time for some hours, coughed up and spat out freely the accumulated fluid in his bronchial tubes. When twenty-four ounces of blood had flowed the pulse had lost its hardness, the veins their tenseness, the pupil its fixed contraction. We stayed there the bleeding. The next morning I saw that patient move from one bed to another, and take part in changing his own dress; and in a few days I heard of him as about in the air comparatively well.

These are the cases on which our predecessors based their treatment of bloodletting. In our day the case is a wonder; in their day it would have passed as a matter of course. In some cases a difficulty arises from the occurrence of convulsions in

comatose states; and in puerperal convulsions, with coma, the difficulty, I know, as to bloodletting is considerable; for, because the extreme abstraction of blood leads to convulsions, therefore it may be considered unsafe, when there is convulsion present, to take blood. It should be remembered, however, that convulsive action may be induced by pressure upon the nervous centres as certainly as by exhausting those centres of blood; and when in any case there is convulsion with no symptom of exhaustion, but with symptoms of tension, then the convulsion is due to pressure, and abstraction of blood is the remedy. The affirmative points of practice, in the cases of coma with convulsion, which call for bloodletting are—(*a*) Sustained temperature, or excess of temperature, of the body; (*b*) tense veins; (*c*) hard pulse; (*d*) contracted pupil; (b) (*e*) free exudation of fluid, without coldness on the skin and mucous substances.

In cases of apoplectic coma with the symptoms I have here noted, the conditions of disease demand the abstraction of blood. They demand it, as it seems to me, so urgently that the patient who is allowed to die without having had given to him the chance of recovery offered by venesection, has been neglected, permitted to succumb by nature, and denied the best of the resources of medical art.

There are, lastly, cases in which coma and convulsion follow on disease of the kidney—cases, so called, of uræmic coma—in which the abstraction of blood is of the most marked benefit. I have treated of these cases in a special essay in the Asclepiad, and have no need to repeat the arguments and facts there detailed. I add, therefore, simply that some years of experience and experiment since the essay named was written have but more fully confirmed me in considering uræmic coma a condition of disease demanding extraction of blood.

CONCLUSION.

I have notes before me treating of other conditions of disease in which the abstraction of blood might be fairly considered. There are, I believe, cases of hæmorrhage, out of mechanical

control, in which rapid abstraction of blood by a vein to syncope would be reasonable and successful practice. Mr. Hunt has referred me to a case of eczema in which bleeding rendered quick and effectual service, and I have a fact or two on the good effect of abstraction of blood in the congestive delirium of typhus; but I leave all these subjects as *sub judice*.

I have, also, some notes relative to cases in which the abstraction of blood, as practiced by our predecessors, was *bad* practice; but this topic is too wide to be entered upon here, except in one particular, which I dare not leave unnoticed. Both theory and practice show that in confirmed inflammatory conditions, where, upon congestion, structural change of some important organ has supervened, where the temperature is persistently high, the skin dry, the tongue furred, there is danger in bleeding. I pointed this danger out long ago, and it lies in this—that, during the inflammatory fever, there is always tendency to deposition of fibrine in the venous side of the circulatory system, and this tendency is increased by the abstraction of blood. Mr. Wells's experience, expressed above, entirely confirms the view thus stated.

And now my present task is over. I have endeavored to avoid doubtful questions, in order to fix attention on what may be said affirmatively and firmly in favor of one of the oldest and grandest of remedies. My object has been to bring that remedy out again to the full light of day, to place it on a scientific basis, to reclaim it, to reform it, and to beg your support in the effort.—*Medical Times, Gazette.*

ART. II.—NOTES ON LAMINARIA TENTS. By J. C. NOTT, M. D., New York.

Much diversity of opinion exists among gynæcologists as to the comparative merits of sponge and laminaria tents. It is conceded generally that sponge-tents should be used with can-

tion, as they are occasionally followed by metritis or inflammation of tissues connected with the uterus—the sponge, in expanding, drives its little projections into the substance of the mucous lining, which is abraded or lacerated in the act of removal, causing more or less bleeding, and often a good deal of pain. Another objection to the sponge is, that after absorbing the animal fluids, it becomes excessively putrid and offensive, and, there is good reason to believe, may produce blood-poisoning. These objections to sponge hold, to say the least, in a much less degree against the laminaria digitata. When the uterus is irritable—sensible to the probe or touch of the finger—when there is any tenderness or disease of surrounding tissues, it is a good rule to dispense with the use of tents of any kind, and the violation of this rule often leads to serious complications.

Our instrument-makers and druggists import the laminaria both in the raw state and made up into tents ready for use. It comes from France, England, California, and the Bay of Fundy, on our Atlantic coast. I have not been able, so far, to obtain satisfactory information as to the natural history of the article, or the precise localities from which the specimens are taken. I have made a series of experiments on the varieties found in our market, which go to show that they differ much in their physical characteristics, and their applicability to the purposes for which they are employed.

From Messrs. Tiemann & Co., 63 Chatham street, I obtained specimens of the raw material from California in its rough state. These differ much in appearance from those of other localities; they are generally hollow, of a dirty, pipe-clay color, covered with rough bark, cylindrical, and as large as lead-pencils of different sizes. When placed in water for twenty-four hours they absorb and expand very slowly, and, after fully expanding, remain so hard, woody, and uneven, as to make one believe that they would bruise and irritate the cervix uteri. I should, therefore, condemn the California laminaria as unfit for use. It may be that the specimens I have seen are *too old*, and

that younger plants would answer better. I am told, too, that there is a difference in the male and female plants—the female being hollow, and the male solid. That I have seen from California is hollow. I hope to get other specimens from the Pacific coast for experiment.

From Mr. Hornstein, No. 52 Maiden Lane, I procured some specimens of the crude laminaria, which he had imported from France, and from which he manufactures very pretty-looking tents for this market. This material resembles closely that of California in physical qualities. It expands slowly in water, and, when fully saturated, is hard, uneven, and woody in texture—almost as hard as a piece of white-pine wood—and therefore objectionable.

Judging by the eye alone, the laminaria tents, as presented for sale by our surgical instrument-makers, are of two kinds, and very different in appearance. The first are beautifully finished, perfectly smooth and cylindrical, with nicely-rounded extremity of tawny, yellowish, or greenish color, and are entirely denuded of bark. From their roundness, smoothness, and bougie-like shape, they look very tempting, but so far as I have tested them they are objectionable—they expand too slowly; after being soaked in water for twenty-four hours they still feel hard and woody, and many of them, when fully expanded by moisture, are almost triangular in shape, presenting edges as sharp as those of a three-cornered file, and well calculated to do injury to the uterus. These tents differ a good deal among themselves—those of tawny color preserve pretty well, when expanded, their regular cylindrical shape, while the greenish ones develop into irregular, angular shapes. Both, I think, should be rejected on account of their hardness and slowness of expansion. Tents of such hardness and tardiness of expansion are likely to irritate, provoke uterine contractions, and be expelled. The second kind of prepared laminaria tents above alluded to, as sold in our market, though by far the best, are not, I think, generally fully appreciated by the profession on account of their rough, ungainly appearance, and from their

usual smaller size. This variety has been obtained by Messrs. Tiemann & Co. from the Bay of Fundy, and is peculiar in appearance; it varies in size from a knitting-kneedle to that of a large goose-quill; its shape is ovoidal near the root, and the stem, which is from one to two feet in length, becomes as flat as tape towards the upper extremity. It is covered by a thin cuticle, which is as black as charcoal, and is more or less rough from the unevenness of the cuticle. When prepared as tents for sale, it is cut into pieces of proper length, pared round at the extremity, and the surface is scraped off a little, to remove the unevenness, but enough of the bark remains to preserve their black color. These tents, made from the Bay of Fundy laminaria, absorb moisture rapidly, and will expand to their maximum in less than half the time required by the European or California varieties. They soon, when placed in water, become as soft and pliable as the tendon of a muscle while fresh. These tents, as sold, look so rough and hard—so like a splinter of wood, that I had a great prejudice against them until I learned how to manage them—I did not see how the uterus could tolerate them.

The manner of using them is simply this: Take one of these tents, no matter how rough or rude in shape, and immerse it in hot water a few minutes, when it becomes coated with mucilage like slippery-elm bark, and so flexible that it may be shaped in any curve to suit the channel of the uterus; it is then as easily introduced as a well-oiled gum-elastic bougie of the same size. The patient is unconscious of its passage or presence; and if a single one is not sufficient to insure the amount of dilatation desired, two, three, or more, may be inserted and placed beside each other. These may be allowed to remain twelve to twenty-four hours, produce no irritation, as do the sponge tents, do not become putrid; and, from their smoothness and mucilaginous coating, are easily removed without producing any abrasion of the cervical canal. These tents can be readily glided into narrow canals, where the sponge could not pass, and are particularly valuable in commencing the dilatation of a very narrow canal. To

guard against their expulsion, I frequently place over the os uteri a pledget of cotton wet with persulphate of iron; the vagina contracts around it, from its astringency, and holds the tents in place.

There is another fact, and perhaps one of importance, that I have not seen alluded to by any writer—viz., *the facility with which laminaria tents may be medicated.* *Watery* solutions of iodine, morphine, and other articles are absorbed by them very readily, and the substance dissolved is retained after the tent is again dried. I immersed a moderate-sized Bay of Fundy tent in Magendie's solution of morphine for twenty-four hours, and ascertained at the end of this time that it had *absorbed about* ℥ij. *of the solution,* containing four grains of morphia. I found, also, that if the tent be well softened in water, and, when still soft and moist, a grain of dry morphia be placed upon the extremity, it will absorb it in a few minutes, and retain it when dried. A tent medicated in this way, introduced into the uterus, will soon produce the constitutional effects of morphia. In using tents, might it not be well, in many cases, to medicate them with morphia, both for the constitutional and local effects.

Some months ago I medicated some tents with morphia, laid them aside, and carelessly got them mixed up with others that had not been medicated. About a month ago I introduced a tent, which I supposed to be unmedicated, into the uterus of a lady. In about four hours afterwards she sent for me to say she was drugged with morphia. I declared my innocence, but she insisted on being under the influence of morphia, and said that the few times she had taken it, the same disagreeable symptoms had been produced. On investigating the matter fully, I found that I had inadvertently used one of the tents medicated with morphia. After removing the tent, I washed it thoroughly with warm water, and touching it to my tongue, the bitter taste of the morphia was still strong. Tents soaked twenty-four hours in Lugol's solution of iodine imbibe it freely, and after they are dried, if placed in water, give it out again quickly; the water assumes the iodine tint in a few minutes. I

have also tried carbolic acid dissolved in very dilute alcohol, but the carbolic acid being volatile, might not be retained any great length of time. Most of the salts soluble in water, I presume, would be readily absorbed. The sea-tangle will not absorb glycerine or alcohol, and cannot, therefore, be medicated by immersion in solutions made of these fluids.

I have not carried my experiments far enough yet, in the practical application of medicated laminaria tents, to say what their true value may be; but they absorb salts so freely, retain them indefinitely, and give them out so readily, that I cannot help believing they may be made useful. Sponge-tents have certainly been medicated to advantage.

My experiments thus far are not complete, and I throw these remarks out more as hints, hoping that others may test the facts more fully.

The following are the conclusions I should at present draw from my observations:

1st. Where moderate dilatation is required, the laminaria is preferable to the sponge-tents.

2d. If placed in warm water, just before introduction for a few minutes, they become flexible, coated with mucilage, are easily curved to suit the cervical canal, and may be inserted with the utmost facility.

3d. From their smoothness and softness they are removed without force, and produce no abrasion or irritation.

4th. They may be medicated with morphia, iodine, or anything *soluble in water*, but do not absorb alcoholic solutions or glycerine. After being so charged, they may be dried and kept for use an indefinite time.

5th. They do not become putrid, and therefore poisonous, as do sponge tents, and may therefore be retained twenty-four hours or more with impunity.

6th. The black, ovoid laminaria, from the Bay of Fundy, is much preferable to the other varieties yet brought to our markets, and free from the objections I have seen made to laminaria by some writers.

7th. The laminaria will be found of great benefit in obstructive dysmenorrhœa, if introduced a few days before the menstrual period, and also in cases of uterine catarrh connected with contracted cervix; they prepare the way well, too, for all intra-uterine medication. In either case, if softened in hot water before introduction, they rarely produce any pain or irritation.

8th. I think it better to insert several small tents than one large one, as the small ones expand more rapidly than the large ones.—*Am. Jour. Obstet.*

ART. III.—MALT EXTRACT. By ALBERT E. EBERT.

The present time in the history of pharmacy, may rightly be styled the era of "scientific specialties." The latest efforts in this direction are malt extracts. Two classes of preparations, under this title, are met with in the market, having widely different properties; one variety may be classed among alcoholic beverages, the other is purely saccharine in nature. To the first belong the preparations of Hoff and of Koch, the latter bearing the name of Liebig. Hoff's extract has obtained a ready sale by aid of extensive advertising, a fact which is surprising, after the exposures made by Hager and Wittstein. These chemists determined it to be simply a good article of *brewer's beer*, having an alcoholic strength of about three per cent., with an addition of marsh mallow root, coriander, staranise and grains of paradise, sweetened with glycerine or sugar, flavored with the oils of lemon and orange, and colored with burnt sugar. Koch's preparation purports to be similar to Hoff's, with the prominent advantage well set forth in the words of the proprietor, as follows: "Owing to the facilities we have in manufacturing in this country, we are enabled to sell Koch's extract at the astonishingly low rate of $3 per dozen, or thirty cents for single a bottle." He magnanimously offers to suffering humanity, lager beer at only six times its retail value, while Hoff charges about fifty per

cent. more for the same article! How thankful we should be for his fortunate "advantage," and we must feel deeply grateful after perusing the circular which accompanies this great medicine. "The most eminent medical authorities in Europe, as well as in this country, agree that this new tonic is the best *dietetic and healing remedy* known to modern science, combining both the merits of a nutritious and palatable beverage, and the virtures of an unfailing medicine for general diseases of the lungs, the chest, and the throat, while to those in good health it serves as a *pleasant table drink*, promoting their digestion and restoring and invigorating their appetite—(for what?) This malt extract offers the most beneficial relief to the sick in all cases where the stomach, the lungs, or the throat are affected."

The reader will say, "but medical men do not recommend such nostrums." In reply we will state that we have had prescriptions for this beer from men who lay claim to a scientific training, and have in each case advised the patient or messenger to procure the same by the gallon at some saloon, where they may obtain it at first cost.

This proves the truth of the saying, "there's something in a name," and Malt Extract is equally as good a term as the celebrated strengthening tonic "Stomach Bitters," whose chief advantage is the quantity of alcohol hidden by the high-sounding titles, and made into a fancy tippling drink by the aid of a few bitter roots, herbs, and spices. But the greatest shame of all is the frequent recommendations and endorsements by letters, which are published by the factors of these vile nostrums, and scattered broad-cast to the public; and these testimonials are frequently from men who occupy prominent positions in science—yes, even teachers in medical colleges. But, alas! we were lately astounded by seeing such an endorsement from a gentleman occupying the chair of pharmacy in the St. Louis College of Pharmacy. His private endorsement might have been overlooked, but when he attached to his name his position in the college, to give it extra weight, he gave an insult to the entire organization in which he holds the office of a teacher; the

remedy of making a few examples by excommunication would go far towards stopping this prostitution of our profession to such base uses.

Of the second class of malt extracts, sometimes called Liebig's, we have seen two samples from German manufacturers—Ed. Loeflund and Dr. H. E. Linck, both of Stuttgard. They were put up in patent-medicine style, each claiming originality in the process of manufacture. This point is questionable, as malt extract has been officinal in the London, Edinburgh, and Belgium Pharmacopœias, and in long-use in Germany under the name of malt sugar (Gersten-zucker).

Prof. Liebig does not lay any claim to the discovery or introduction of this preparation; we have heard him, during his lectures, denounce this attachment of his name to these extracts, it having been done in oppositon to his wishes by parties who hoped to increase their sales by this seeming endorsement of their articles. We have lately made the malt extract, at the urgent request of physicians, and give herewith the process, so that pharmacists may prepare it themselves, instead of relying upon the specialist to supply it at exorbitant prices.

Take of barley-malt, kiln dried, 10 lbs., av.
" water, q. s.

The malt can be obtained at the malt-houses or breweries by the bushel; reduce it by means of the drug-mill, so that it will pass through a No. 20 sieve, and add to the meal a sufficient quantity of cold water to form with it a soft dough; then add about two gallons of hot water, and apply heat so as to raise the temperature of the mixture to 150°, or not to exceed 158°. Maintain this temperature, with occasional stirring, for several hours, or until the whole of the starch is converted (by means of the diastase of the malt) into dextrine and glucose. The absence of starch can be ascertained by the application of tr. iodine to a small quantity of the liquor, when, if the starch has been wholly converted, no blue coloration will be evident. Then express the liquor rapidly, and pass it through a strainer. This is the most difficult part of the process, as it speedily

clogs the strainer; this can be averted to some extent by making a pulp by means of water from common unsized paper, or filtering paper, and mixing this pulp with the expressed liquid previous to straining. The perfectly clear fluid is finally to be evaporated, by means of a water-bath, to the consistence of a thick syrup, having the sp. gr. 1.500, or approximately one pint, weighing 1½ lbs., av.

This extract has an agreeably syrupy taste, and contains, besides the sugar of the malt, dextrine, albumen, and the phosphates of the grain. In very hot summer weather it is liable to go into fermentation, but this can be prevented by the addition of a small quantity of glycerine.—*Pharmacist.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—EXTRACTS FROM THE REPORTS MADE BY THE BRITISH Government Commissions on the Chemical quality of the supply of water for the city of London, showing the safety and superiority of Lead Pipes as water conduits; also interesting facts drawn from American and German authorities.

From the report of Thomas Graham, F. R. S., W. A. Miller, M. D., F. R. S., and A. W. Hoffman, Ph. D., F. R. S., to the Right Hon. Sir George Grey, Bart., Her Majesty's Principal Secretary of State for the Home Department:

"The water at present supplied may be circulated through leaden pipes or preserved in leaden cisterns with an unusual degree of safety. The corrosion of water cisterns in London is generally occassioned by the mud, which subsides to the bottom, particularly when the sediment includes organic matter, and the

evil might be greatly diminished by more frequently cleaning out the cisterns. But it is to be particularly remarked that this corrosion is not attended by any sensible solution of lead in the water, and that the water of the cistern is not poisoned in consequence.

"Of the soft spring water of Surrey, the corrosive action on lead is remarkably small, according to our own observations, which generally accord with the conclusions of Mr. Napier on that point. But there is little hope of a sufficient supply being obtained from these springs of this extreme degree of softness; and the harder supply from streams of the same district would probably not differ much from the supply of Glasgow and some other large towns, where the water is always exposed to lead service pipes, and also occasionally kept in leaden cisterns, although the general supply is constant without any apprehension of lead poisoning.

"The most practical, perhaps, of our observations is the extraordinary influence remarked of the small quantity of carbonic acid which water usually contains upon the results. This effect is, fortunately, to neutralize to an extraordinary degree the usual solvent action on lead which water exercises through the agency of the oxygen dissolved in it.

"The soluble oxide of lead is converted into the carbonate, which, though not absolutely insoluble, appears to be the least soluble of all the salts of lead. Pure water did not dissolve a quantity of carbonate of lead greater than one sixtieth of a grain to a gallon, or one part of lead in 4,000,000 of water; while water, on the other hand, which contained already so much as six grains of oxide of lead dissolved in it to the gallon, had the quantity of metal reduced to one-fifty-seventh of a grain by free exposure to the atmosphere for twenty-four hours, the lead being deposited as carbonate of lead in consequence of the absorption of carbonic acid gas. So minute a trace of lead remaining in the water could have no possible influence on health. The quantities just stated also represent pretty closely the proportion of lead which was dissolved by water left in contact with the

metal in a divided state, during a period of not more than twenty-four hours, in two experiments, the water being simply distilled water in one experiment, and distilled water containing three per cent. of its volume of carbonic acid gas in the other. The pure water became highly poisonous, but that containing carbonic acid remained safe. The lead was in the form of the lead pyrophorus prepared from the tartrate of lead, in which the metal is in an extreme state of division, and therefore exposes an enormous surface to the water. Carbonic acid is usually present in well, river, and lake waters, in the quantity sufficient for protection; and the immunity of such waters from lead impregnation we would ascribe often more to their carbonic acid than to the salts which they may also contain; for lead placed in distilled water which has been boiled to expel its carbonic acid, is no longer sufficiently protected by the addition of the same salts. The properties of the water which enable it to act at times with unusual vigor upon lead are little understood, and seem often to arise from the accidental action of local and limited causes, such as the presence of decaying leaves and impurities which may only affect a small volume of water. These causes are of a kind most to be dreaded in the supply of a single residence, in which the volume of water might at a time assume the same dangerous composition. But such causes, probably, often counteract each other when large volumes of water are mixed together, as in the supply for a town. It is at least difficult to account otherwise for the fact, that no recent and authenticated case can be cited of the health of any of the numerous towns lately supplied with soft water, being affected by the use of leaden distributory tubes, although apprehensions were often entertained from the introduction of soft water, as in Boston, in the United States, where the subject has excited much attention, and at New York since the introduction of the Croton river.

"Aberdeen is supplied by water from the Dee under one and one-half degree of hardness, which is distributed by iron mains and taken into the house by leaden service pipes, to which leaden cisterns, generally of small dimensions, are commonly attached.

The supply is constant, and amounts to about 1,000,000 gallons a day. A very careful and valuable series of experiments were lately made by Dr. John Smith, Fordyce Lecturer in the University, with the view of ascertaining the action of water upon the leaden pipes by which it is conveyed. These pipes vary from 12 to 100 yards in length. In some instances no indication of the presence of lead in the water which had passed through the pipes was found; in others, however, small quantities of lead were discovered in solution. The quantities varied from 1-100th of a grain to about 1-20th of a grain of lead to the gallon of water. Dr. Smith concludes that less than 1-20th of a grain of lead in the gallon of water produces no deleterious effect upon the health of those using the water for dietetical purposes, and that the lower limit of the deleterious action is between 1-10th and 1-20th of a grain of lead to the gallon of water. Here, then, is a population, it might be supposed, constantly on the verge of danger from lead poison; but in reply to our inquiries on the subject, we are assured by Dr. Dyce, the eminent physician of Aberdeen, that during a period of seventeen years he has never known an instance of illness from this cause. He adds in his letter: 'I have mentioned the circumstance to several of my colleagues, and they all decidedly say that such a complaint is wholly unknown to them.' From Whitehaven also, where water of the same extreme softness has been in use for the last six months, we learn that no case of lead poisoning has been seen or heard of by the medical practitioners of the town which could be attributed to the use of the water. We are disposed, therefore, to conclude that the danger from lead in town supplies of water has been over-rated, and that with a supply from the water companies, not less frequent than daily, no danger is to be apprehended from the use of the present distributory apparatus."

Minutes of evidence taken before the Royal Commission on Water Supply:

G. W. Hemans, Esq., Member of the Council of the Institute of Civil Engineers, whose plan was to supply London from the Cumberland lakes, in which locality there are numerous lead

mines, testified, that "there is another not quite so extensive mine on the other side of the ridge, Hellvellyn, which delivers water into Thirlmere, which would be treated in the same way, either by piping it away to some of our outlets, or else by settling ponds; but I think it will be found that there is little or no lead in that washing, but merely the clay which the lead is in. It discolors the upper part of the lake, and people who pass it without any knowledge, think it is all lead and all poison, but I may observe that the favorite spot for fishing is just round the mouth of that river; the fish seem to find something in that clay which they like, because it is there that people fish, and I do not believe that there is anything injurious in that water."

R. Hassard, Esq., Member of the Institute of Civil Engineers of England, whose project was similar to that of G. W. Hemans, testified, that "we intercept the washings from the lead mine at Glenridding, at the lead mine itself, and we propose carrying it by a line of iron pipes until it would be discharged into the river Eamont beyond Ulleswater. It first goes into the lake, and then into the river Eamont at present. It would be in precisely the same condition when it got to the river Eamont as when it left the crushing mills. It would not be more diluted when it got to Ulleswater than it is at present, as the carbonate of lime, for it is not lead, is now precipitated in the lake all round the mouth of Glenridding Beck, which is the stream coming down from the lead works. This water, when it reached the river Eamont, was very carefully tested for lead, but not the slightest trace of lead could be found in it. The coloring matter is carbonate of lime, and not lead. I saw a man standing and wading in the lake up to his knees, at the mouth of that burn, and I said to the boatman, 'Is it possible that the man is fishing? Surely no fish can live there?' but, he said, it was one of the very best places for trout in the whole lake, so that as far as the fish were concerned, it did not appear to affect them."

Thomas Dale, Esq., Engineer to the corporation Water Works of Hull, stated that he "would use iron pipe coated externally and internally with tar, which coating would last some two

or three years, after which the pipes must take their chance." John Thomas Way, Esq., Professor of Chemistry, and member of the Rivers Commission, testified that "he had made an analysis of the waters of the river Lowther, and of the three lakes, Haweswater, Ulleswater and Thirlmere, from which it was proposed to supply the city of London, and that upon the river Lowther there are some lead mines in the immediate vicinity of Ulleswater, and those samples were tested for lead with a view to ascertaining any injury that might arise from that cause, but lead did not exist in the samples. Lead does not exist in any of the four waters, and the sample in question, I am informed, was taken in the middle of the lake, in the upper part of which the lead washings are discharged. By my process, I could detect an extremely small quantity of lead; anything that would be likely to be prejudicial to health could be readily detected.

"Leaden piping, which is constantly charged, would become coated very soon, and the lead be protected by the oxide. I think that iron cisterns are apt to rust if they are not covered with asphalt. I have known cases where iron pipes with soft water have been entirely destroyed in a year or two from lying on the side of a hill where they were alternately empty and full, in fact, half empty and half full. A little iron is not objectionable to the human frame for drinking purposes, but the pipes are injured, and the iron does not get into the water; it rusts into oxide of iron, which makes the water turbid, but it is not dissolved. I believe that it is quite likely that, in some towns, the iron pipes have to renewed in the course of a few years, from the action of the water upon them. I can mention a case which actually occurred with the water of the Surrey sands, the Bagshot sand, at Farnham: A friend of mine, Mr. Paine, laid down water from some moor or common land, above Farnham, to supply the town, and iron pipes were used. The water came down very freely, but the pipes, which were three or four-inch pipes, were only partially filled, and in two years they were entirely destroyed by the soft water. You might consider that there was a current of air passing up the pipes at the same time that

the water was coming down, and the action of the air together destroyed the iron. It is a well-known fact that iron in an unprotected ship is destroyed much more at the water-line than it is either above or below."

Robert Rawlinson, C. B., testified, that "galvanized iron pipes are not to be recommended. They cost forty to fifty per cent. more than plain pipes, and the galvanizing is a delusion. If the pipes are laid in subsoils which will act upon iron, the galvanizing affords no protection against that action, and there are soils which will rapidly eat away either iron or lead. If you examine a galvanized iron pipe under a microscope you will find that it is not an even coating; it is freckled, and there are interstices, oxidation sets up, and then the galvanizing is blistered off; it does not improve, and, even so far as it does cover it, I doubt very much whether it preserves it; it is not stronger in its texture, and it certainly does not last longer; that is my experience."

Thomas Duncan, Esq., Engineer of the Liverpool Water Works, stated "that the effect of soft water upon iron pipes was to produce an infinite number of small tubercles; those have grown up, and they project, in many instances, for about three-quarters of an inch, reducing the diameter of the pipe between point and point one and a half inches, thereby increasing the friction. They form an infinite number of little eddies, and it is not only the space they occupy in the pipe, but from my observation I believe the effects extend much further into the interior of the pipe, and disturb the current. I have not found that the mixed waters, which we now deliver in Liverpool, have any effect upon the lead pipes, as the pipes become coated on the inside by the earthy salts which are held in suspension. I have not had any opportunity of examining the effects of the Rivington water, by itself, upon lead, but I believe that, after the lead is once coated over, the water has no effect whatever upon it; after passing water down through a new pipe or a new cistern the action of the water upon the lead ceases in a very short time. At first, chemists tell me, it has an action, but I have not found in practice that we have that continued action. In this

district to which I refer (the Bala district), there is not a lead mine. There is one mine worked to a moderate extent, and that is a gold mine. I have looked at the color of the washings coming down it, and before they pass one hundred yards into the lake all the turbidity is gone, and the whole of the matter, which was held in suspension, has been precipitated, and the water becomes pure."

Alexander Bain, Esq., Professor of Logic in the University of Aberdeen, stated that "Aberdeen has a new supply of water taken higher up the river Dee, which is perfectly soft, and has the advantage of greater purity as regards mud or sediment. The question of the action of lead upon it has been a matter of chemical investigation, and the results, so far as regards that, were perfectly satisfactory. It is a constant supply."

Dr. Edward Franklin, F. R. S., corresponding member of the Imperial Institute of France, and professor of chemisty in the Royal Institution, and in the Royal School of Mines, testified in regard to the water from Bala Lake, with which it was proposed to supply London, that "he detected the effect of the mineral workings upon the water with regard to turbidity in several cases. Some of the samples collected by Mr. Pole were turbid at the time of collection, and they retained their turbidity for some weeks afterward. All those samples which flowed from mineral workings, or were contaminated by water from mineral workings, were specially examined for noxious mineral substances, and we found in either two or three cases the merest trace of lead; but in all other cases no metallic noxious substance of any kind was present. I think it was in samples from the lake district exclusively that the trace of lead was found. But I may mention that the trace was so utterly insigficant that it was only just capable of being revealed by the most delicate chemical processes, and the notion that it might be hurtful when mixed with the rest of the water, or even hurtful if that water alone were drunk, is quite out of the question.

Speaking of the action of soft water upon lead, he says, "We have many cases in those waters which have been examined by

my colleague and myself for the commission, of very soft water not acting in the least upon lead, even upon bright lead, so that there is no necessary connection between the softness and the action upon the lead."

J. F. Bateman, Esq., testified in regard to his plan for supplying London (in which plan it was proposed to bring water from the lead-mining districts): "In the place of the lead-workings, which have been discontinued, other works have been commenced at other places; but it seems from the evidence which has been laid before you that no contamination of the water arises, that no lead is discovered, that the grosser particles may very easily be intercepted by subsiding reservoirs, as has been done, and that the finer parts of the material which is carried down from the washing are of real service to the water." He also testified that "they use leaden pipes in London; wrought iron pipes will not do; they corrode and burst. I tried them in my own house, and that was the result. Note, he afterward substituted lead.

Samuel Collett Homersham, Civil Engineer, examined: "I may state practically that I made the works, as I said, for the supply of Castle Howard with softened water, which have been in operation for a great many years. The water is pumped by a water-wheel for the supply of Castle Howard through a lead pipe, which is laid all the way up from the works, which are something like half a mile distant, to the castle, and the cistern itself is lined with lead. It is a very large cistern, perhaps half as large as this room, and there has not been the slightest action either upon the lead pipes or upon the cistern. I was at the works a very short time ago, indeed within the last fortnight, and there is not the slightest action upon the cistern or upon the pipe. The late Earl of Carlisle, who also took a great interest in the softening process (and it was through him that it was adopted at Castle Howard), had the water constantly examined when the works were first in operation, to see if there was any action upon the lead by the water, so that nobody might be injured at the castle." Speaking of the Caterham

Water Works, he says: "There we have no complaints, and in fact I may say positively, that there is no action of that water upon lead. I have a report by Mr. Campbell, who has analyzed that water most particularly for its action upon lead, and in it he states, 'The action of the softened water was tried in a very severe manner by exposing it for six days to bright-scraped lead, and likewise to ordinary lead, such as in pipes and cisterns, only in each experiment the surface of lead exposed was very much larger indeed than would occur in practice; and on testing the water afterward by the most delicate tests, I was unable to detect a trace of that metal in either case, so that this water may be said practically to have no action whatever upon lead, which is not the case with many hard waters, although their action is generally slight, and scarcely what may be termed of a deleterious nature.' We have practically supplied it to cisterns in Caterham lined with lead, and we find not the slightest action upon the lead by that water."

From the New York Evening Post of April 18, 1870.

The subject of pipes, for the conveyance of water in this city, having lately been suggested by parties connected with the Board of Health, and various propositions as to which metal makes the healthiest pipe having from time to time been made, we deem the subject of such vital interest to the community that a few practical remarks will not be out of place at the present time.

Pipes made from pure block tin appear at the first glance to be the healthiest and best, but on careful examination serious objections present themselves to their practical use.

Tin melts at a very low temperature, (442° F.) and is rendered useless if hot water is allowed to pass through it, the effect being to soften it and destroy its shape. There is some innate quality in tin which renders it a very unreliable metal, as pipe made from the best and purest tin known to commerce will sometimes, even when made with the greatest care, be full of small holes, hardly visible to the naked eye, yet sufficiently large to allow the water to ooze out. If a tin pipe be laid in

ground of lime formation, or if water containing lime be drawn through it, the tin will be rapidly eaten up. Tin, therefore, as a conduit of water, must forfeit all claim to durability. In addition to the above, the price of block tin is so high, owing to the fact that the supply does not keep pace with the increased consumption, that it cannot be brought into general use.

Lead-encased, or tin-lined pipe, is also considered by some as suitable for conveying water, but practically it is not only not suitable, but really dangerous to health. The lining, when perfect, is so thin that the slightest bend or bruise is apt to crack it. The difference of temperature at which the lining (tin) melts (442° F.) and the outside (lead) (612° F.) and the consequent contraction and expansion by heat and cold, produce a separation between the two, thus causing the lining to crack, and the two metals to be exposed to the action of the water. The science of chemistry establishes the fact that metals, differing in chrystaline structure, when placed together in common water, are, by galvanic action, rapidly oxidized, disintegrated, and destroyed. If lead and tin are placed in juxtaposition, with access of water, one or both of the metals will suffer from corrosion. The least defect in soldering, crack from bending, overstraining, defective manufacture, or corrosive action, whereby the water comes in contact with the lead, causes electrical currents to flow between the metals, and disintegration, poisonous to those using the water, immediately results.

Professor Augustus Matthiessen, F. R. S., in his lecture on "Alloys and their Uses," before the Royal Institution of Great Britain, declares that no two metals are known which do not dissolve when in combination and acted on by the water.

Galvanized iron pipe has been extensively used, owing to its combining strength and cheapness; but still it does not meet the requirements of health and durability. Dr. Jackson, the Assayer of the State of Massachusetts, in a letter dated Boston, February 4, 1868, states, in answer to an inquiry as to his opinion of the merits of galvanized iron pipes for water conduits, that—

"The iron is protected by the more ready oxidation of the zinc, and that the oxide of zinc is largely dissolved by water, rendering it unwholesome. In several instances I have detected large proportions of oxide of zinc in water that has remained over night in galvanized iron pipes; and, in one instance, a gentleman who brought me such water said it produced in him much nausea. The water analyzed was found to be highly charged with oxide of zinc. It is well known that when zinc-covered roofs were first introduced in Boston, and rain water from them was used for washing, that the washer-women complained that the water made the skin of their hands crack, and the rain water from the zinc roofs was hard, and decomposed the soap. It is also known that the French Government has recently forbidden the use of galvanized iron water-tanks in their ships on account of the injurious effects of the dissolved zinc on the health of the men. All this shows that galvanized iron pipe is not suitable for water conduits."

Lead pipe has been in use over five hundred years in England and elsewhere, and has, therefore, had a longer practical test than pipe made of any other metal. It combines the necessary requirements of strength, durability, pliability, convenience, cheapness, and *health*. It is thought by some that water drawn through leaden pipes is unhealthy. This is true of *chemically pure or distilled water*, but not of the water ordinarily used for driking. The former is generally used by chemists when making experiments as to the effect of lead on water, but *very rarely* for drinking. Professor Stockhardt, of Saxony, in his "Principles of Chemistry Illustrated" (translated by Dr. H. Pierce, and endorsed by E. N. Horsford, "Rumford Professor in the University at Cambridge"), says "Pure" (chemically) "water readily attacks lead, and converts it into hydrated oxide of lead; in *spring water*, on the contrary, *there is formed* in time, by the sulphates almost always present in it, some *insoluble* sulphate of lead which forms a *firm coating* upon the *metallic* lead. This explains the harmlessness of leaden pumps, which, in many countries, are quite generally used instead of

wooden pipes." That this is true of leaden pipes, experience has abundantly proved.

The commission appointed by Parliament some years since to investigate and report what kinds of pipe were the healthiest and best for conveying water, decided in favor of lead. In their report, among other curious facts, they stated that after experimenting with water taken from the various lakes and ponds available for supplying London, they found that the purest water came from a lake which received all the *washings* from neighboring lead mines.

A full chemical analysis in regard to combination of metals for water-pipes, and also the report of the commission alluded to, are contained in the London Chemical News and Journal of Physical Science, probably the most scientific print of the age.

ART. II.—TINCTURE ARNICA IN ACUTE PULMONARY AFFECTIONS.

C. C. Balding, M. R. C. S., in the Lancet December 24, 1870, reports two cases, one of pneumonia and the other of hœmoptysis, as cases illustrating the value of this remedy in the treatment of acute pulmonary affections. He was first induced to employ arnica in such cases by observing its effects in "keeping down" the pulse of a man who had his chest squeezed between the buffers of two trucks. Mr. Mitchell Henry has previously written an article upon its use in allaying traumatic fever. He has treated since a large number of cases of pneumonia and hœmoptysis, and relies solely upon it in doses of five to ten minims in an alkaline solution every three hours. It has the effect of controlling the pulse and the frequency of respiratory movements.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

LESSONS FROM THE MEDICAL CLINIC AT THE "HOPITAL DE LA CHARITE," given by S. JACCOUD, Assistant Professor to the Faculty of Medicine at Paris; Physician to the Hospital St. Louis; Chevalier of the Legion of Honor; Corresponding Member of the Royal Academy of Science of Lisbon, and of the Medical Societies of Berlin, Vienna, Wurzburg, etc. Containing twenty-nine wood cuts and eleven chromo-lithographs. [Translated by Dr. J. D. JACKSON, of Danville, Ky.]

THIRTEENTH LECTURE—PROGRESSIVE MUSCULAR ATROPHY.

(CONTINUED.)

Elements of Diagnosis—Chronological Relation between Atrophy and Akinesia—Manner of Distribution of the Muscular Lesions—Differential Characteristics of the Atrophy in Paralysis from Lesion of the Brain, the Spinal Marrow, and Nerves—Concerning Contracture in Progressive Muscular Atrophy.

Pathological Anatomy—State of the Muscles—State of the Nervous System—Lesion of the Anterior Roots—Lesions of the Marrow---Lesion of the Sympathetic.

Concerning the Localization of the Malady in the Vegetative Nervous System---Examination of Objections thereto---Conclusion.

Treatment of Progressive Muscular Atrophy.

Gentlemen,—In giving you the history of the patient in St. Anne's ward, I am disposed to return to the connection and succession of the diverse symptoms she has experienced; it is indeed a knowledge of these connections which underlies the diagnosis, which reposes entirely upon the two following elements: 1st. The chronological relation of the atrophy and the impossibility of movement. 2d. The manner of the distribution of the lesions and the symptoms.

In progressive muscular atrophy the diminution in volume of the muscles precedes the difficulties of movement. The partial

deformities, the disappearance of the normal salient points (observe, all reserve made for the initial pains) are the first symptoms in the order of date; the loss of motor power, more or less complete, which succeeds it, is the direct consequence of the degradation of the muscular system; there is less motion produced, because there are fewer contractile elements for its production—observe this; but the muscles, all altered as they are, obey the will, there is not then a paralysis, since this word, in the precise sense which it is customary to give it, implies the existence of a perturbation of the innervation of voluntary motor power; this is intact, only the muscle is insufficient to accomplish the manifestations; the more its insufficiency the more difficult and incomplete are the motorial manifestations, there is thus a connection, vigorously proportional, between the muscular failure and the degree of *akinesia*, the one follows the other, as effect follows the cause which engenders it.

You will comprehend the importance of this first element of diagnosis if you will reflect that this chronological relation between the symptoms of atrophy and akinesia, suffice for eliminating *en masse* the common paralysis resulting from a lesion of the brain, the spinal marrow, or the peripheral nerves. Under all these circumstances the abolition of motion is the first phenomenon; this akinesia is generally complete, and precedes for a time—often a very long time—the signs of atrophy. In paralysis from lesion of the encephalon, the atrophy takes place when the lesion is not repaired, the paralysis persisting; but this atrophy is essentially tardy; it is united to the secondary degeneration of certain parts of the marrow, and this regressive work, brought about by the encephalic alteration, does not commence until the end of some months, as has been established by the remarkable observations of Turck.

In the paralysis from a lesion of the marrow, the atrophy can fail completely, if the lesion has simply interrupted the continuity of the spinal axis, without bringing about an alteration, a disorganization of the inferior segment. When this segment is itself altered, atrophy comes on, but it is far from being contem-

poraneous with paralysis of motion; the nutrition of the muscles does not commence being compromised until their excitability is lost—that is to say, until five or six weeks after the debut of the paralysis. Then also the electric contractility is abolished, although the muscles have a volume far more considerable than in progressive muscular atrophy.

Finally, in paralysis by traumatic lesion, or degeneration of the spinal nerves, the atrophy, it is true, is very precocious, but coincidently with it, or before it, there is observed an abolition of electric contractility, which can be absolute in the second week.*

To these diagnostic elements of the first order, furnished by the simple chronological relation between atrophy and incomplete akinesia, a consideration of the mode of distribution of the lesions comes in as an addition no less important.

In the malady which we are studying, the atrophy of the muscles in its progress pursues such a peculiar course that, without being constant, it is nevertheless frequent enough to become a characteristic. It originates in the small muscles of the extremities, which it first attacks on one side only, after which it attacks the homologous muscles of the side opposite; it proceeds thus, from one side to the other, coincidently progressing from below upward. This ascending progress is not always uniform, for example, in passing from the hand to the shoulder, lesion does not successively involve all the muscles of the upper limb, it spares some, and strikes others, and sometimes it jumps, at a bound, to the deltoid or serratus magnus. In the lower limbs the atrophy is slower, and procceds with the same irregularity, generally localizing itself in the anterior muscles of the thigh and leg. Our patient has presented us with a beautiful example of this classical march; a single peculiarity only ought to be pointed out as exceptional, this is the predominating atrophy of the extensors of the upper limb. A like mode of distribution clearly differen-

* For more details see the succeeding lectures on progressive nervous atrophy, and our work upon paraplegias (Paris, 1864.)

tiates muscular atrophy from the regular paralysis of the hemiplegic or paraplegic form; it equally separates it from paralysis with atrophy, resulting from a lesion of the nerves, for here the disorders are rigorously localized according to the sphere of distribution of the nerves affected.

Finally, the essentially progressive character of the malady, and its spontaneity, ought also to be taken into consideration; by the primitively spontaneous development you can always separate the atrophies which succeed acute disease, especially the pyrexias, and the atrophy of the hands, which is observed in certain cases of spedalkshed; by the progressive invasion you can distinguish it from the fixed atrophies, which neuralgias and rebellious rheumatismal pains sometimes leave after them.

M. Duchenne, who has reported three interesting examples of atrophy of the hand in the leper, invokes as a differential sign a contraction of the flexors coincidently with atrophy of the interosseous muscles; this contraction he has never seen in progressive muscular atrophy. Upon this point I am not in accord with the views of this eminent observer.

The contracture is certainly not very rare, but rarity is not synonymous with impossibility, and this symptom, which has not presented itself to the extended observations of M. Duchenne, has been seen by other physicians, and among them, by Gros, Oppenheimer, Valentiner, and Gairdner.* It is not proper, then, in a given case, to rest solely upon the presence of contractures to eliminate progressive muscular atrophy; in

* An attentive observation of our patient permits me to add, that these contractures can be temporary; in the month of September, five months after this lecture, this woman presented an undoubted contracture of the flexors of the left hand, and the flexors of the legs; this contracture could not be overcome by the patient, but was easily done so by artificial extension. It was at this time that Professor Schiff saw the woman, and he was struck by this unusual phenomenon. Things continued thus until the end of October; dating from this time, the contracture gradually yielded; and when, on the 12th of December, I saw the patient, she could support herself upon her legs, and the left hand was extended and supple; the contraction had then totally disap-

the patient of Oppenheimer, the contracture of the flexors of the leg maintained the knee in a state of insurmountable flexion, which persisted invincibly up to death; the autopsy fully confirmed the diagnosis. This fact, we would say in passing, is still more interesting in an etiological point of view; a brother, three cousins, and two uncles of the patient were affected with the same malady. As contracture is possible in muscular atrophy, do not forget it;* but do not, also, forget to bring to mind another cause of error, to which clinical observation is exposed. One should not mistake for muscular contracture, that contraction of the skin and subjacent fibrous tissue which brings about immobility of the parts placed in a vicious position when the antagonistic muscles are not likewise atrophied.

I come to the pathological anatomy; it embraces two questions, the state of the muscles and the state of the nervous system. After numerous controversies touching the fatty atrophy admitted by Cruveilhier, Aran, and Duchenne, and the granular degeneration affirmed by Robin and Ordonez, accord is established between these two opinions, which have nothing incompatible between them. Virchow and Oppenheimer regard these two different lesions as two successive steps of the same alteration, which, originating in the granular state, finish by fatty transformation. Many autopsies, one of Frederick's, among others, justify this view, in showing upon the same individual the different periods of the process. There are, then, in the complex lesion of progressive muscular atrophy two dis-

peared. In retaliation, the phenomena of true paralysis now developed in the upper limbs. This succession of divers symptoms had nothing in it astonishing; we come to see that in progressive muscular atrophy the lesions of the nervous system have an extensive and very variable seat, and I can well conceive that to the atrophy proper, or pure atrophy, there are added other disorders which are the result of disseminated alterations of the spinal axis.

* Gros, De Catrophie musculairo progressive, etc. (Gaz. hospit., 1855).

Oppenheimer, Ueber progressive fittige Muskelatrophie. Heidelberg, 1855.

Valentiner, Fall von progressiver Muskelparalysie. (Prager Vrerteljahrsschrift, II., 1855).

Gairdner and Clarke, Archiv. of Medicine, III., 1861.

tinct phases. There is first observed the disappearance of the tranverse longitudinal striæ, and in the meantime the contents of the myolemma or sarcolemma present as a granulous segmentation; it is replaced by opaque granulations of a nitrogenous nature, which are for the most part soluble in acetic acid, whilst they are not modified by either ether or alcohol. The muscular fasciculi then undergo a considerable diminution of volume; according to Professor Robin, they can fall from 50 to 70 thousandths of a millimetre, their normal diameter being from 5 to 4 thousandths. Finally, these granulations undergo the fatty transformation, and the fat is likewise deposited in the muscular interstices, what constitutes the fatty degeneration called interstitial, in opposition to parenchymatous degeneration. Whether one regards these two lesions as distinct and isolated, or as the one necessarily succeeding the other, it is none the less true, that there is room for recognizing in the muscular atrophy two dissimilar alterations—the granular and the fatty; this last ordinarily presenting two forms combined, the parenchymatous and the interstitial.

Finally atrophy, the disappearance of the contractile element, can be produced by still another mechanism—to wit, by the proliferation of the connective elements entering into the composition of muscle; when this substitution is achieved the muscular fibres are transformed into fibrous cords. This lesion can coincide in the same subject with fatty transformation, but it can also exist singly, as proved by an observation made in common by Eisenmaun and Friedreich.* This muscular sclerosis appears to me to correspond to the third form of atrophy described by Professor Robin as an albugineous formation. A knowledge of this special lesion is of great clinical importance; it gives a conception of the possibility of permanent muscular contractions in progressive atrophy, and furnishes a satisfactory interpretation of this symptom.

* Eisenmaun, Muskelatrophie (Caustall's Jahresbericht, etc., III., 1859). Die Pathologie und Therapie der Rheumatosen in genere. Wurzburg, 1860.

I will not insist further upon these lesions of the muscles; the preceding contributions suffice for the clinical study of the disease; those among you who desire to go more deeply into the subject will find all the necessary details in the remarkable work of my friend and colleague Simon*.

The state of the nervous system merits all your attention, for we here find ourselves in the presence of a pathogenetic question which has been for a long time debated—Progressive Muscular Atrophy: Is it a disease of the nervous system? Such is the problem which is contemporaneous with the discovery of M. Cruveilhier, and which has been, turn by turn, resolved in two senses; the response to this question ought no longer to be based upon theoretical arguments or physiological considerations; science to-day possesses sufficient facts to surely unravel the solution sought; it suffices for this, to take into account all the cases, and to group them according to an order which will facilitate their comprehension and exhibit in relief the most important traits.

Now, with reference to all which concerns the nervous state, the autopsies of progressive muscular atrophy can be divided into four natural groups. In the first, I place the examples of lesion of the anterior nervous roots; in the second, I comprehend the lesions of the marrow, with or without concomitant lesion of the roots; I consecrate the third to the cases of lesion of the sympathetic nerve; in the fourth group, finally, I range the autopsies called negative, in which there is not established any alteration. I think I have no reason to remark to you that I think the simple possibility of this class indicates by itself the response which ought to be formulated.

I. *Lesion of the Anterior Roots.*—The lesion of the anterior nervous roots consists in a diminution of volume in an atrophy of these roots; M. Cruveilhier has recognized the normal numerical relations of these roots with the posterior, and the rupture

* J. Simon, Atrophie musculaire (Nouveau Dictionaire de mid. et de chiv. Pratiques, IV., 1866.

of these relations to the profit of the latter reveals atrophy of these last, and permits an appreciation of the degree. In the normal state, in the cervical region, the posterior roots are to the anterior as three is to one; in the dorsal region, as one and a half to one; in the lumbar region, as two to one. In muscular atrophy the volume of the anterior roots can be diminished to such a degree as to be as ten to one in the neck, and five to one in the lumbar region; it was what took place in the famous patient of M. Cruveilhier.

This is the first group which contains the most numerous and the best known observations; to enter into the details would be superfluous, and I hasten to recall to you the autopsies of Cruveilhier, Aran, Reade, Brattler, Valentiner, Vulpian, Trousseau, Sappey, and Baudriment.* I omit others still, in which the atrophy of the roots has coexisted with lesions of the marrow, and which consequently appertain to the second group. See then a first point well established; in a good number of cases of progressive muscular atrophy, autopsy has shown a more or less pronounced atrophy of the anterior roots; it is always in the cervical region, that the alteration has been marked.

II. *Lesions of the Marrow with or without Atrophy of the Roots.*—This group is based upon many important observations, extending throughout the entire spinal axis, the domain of the nervous lesions peculiar to progressive muscular atrophy. A word only upon the facts, for you will judge for yourselves of the diversity of the alterations observed. In the patient of Valen-

* Cruveilhier, Comptes rendus de l'Acad. des sc., 1855. Arch. gen. de Med. 1856.

Aran, Bullet de l'Acad. de Med., 1854.

Reade, Contributions to the pathology of the spinal cord. (Dublin Quarterly Journal, 1856.)

Brattler, Beitrag zur Lehro der Faradisation. (Aertlich. Intellig, Blatt., 1858.)

Valentiner, Fall von progressiver Muskelatrophie. (Prager Vierteljahrs, 1855.)

Trousseau, Clinique Medicale.

Vulpian, Bullet. de la Soc. Med. des hopit. Union Med., 1863.

Baudriment, Journal de Medic., de Bordeaux, 1866.

tiner, there was a fatty atrophy of the anterior cervical and dorsal roots; besides, there existed a central softening of the anterior portion of the grey substance in the region of the three last cervical nerves and the four last dorsal; in the superior cervical part of this softening the ganglionary cells were no longer found intact; in the points softened, both before and behind, in the white substance, as well as the grey, there were numerous granulations. The arachnoid presented, especially in its posterior aspect, patches of diverse dimensions and consistence.*

In Virchow's case, which dates back to 1855, it is a grey degeneration which was established in the posterior white cords of the marrow; numerous amylaceous corpuscles occupied the affected parts, the grey substance was intact.† A case analogous has been since observed by Dr. Dumesnil, of Rouen.‡

In a patient, the observation and autopsy of whose case has been reported with the most circumstantial details by Frommaun and Leubuscher, the roots were normal, but there was in the cervico-dorsal region of the marrow a flattening out of the substance, due to the existence of a vast focus of red softening, commencing posteriorly near the suface of the marrow, it extended in front, even to the anterior cords, and measured in length from eight to ten centimetres.

The commissure and the neighboring substance of the anterior cords were the points most altered. The microscope showed in the parts altered the debris of nervous fibres, of granular detritus, of amylaceous bodies, of little extravasations of blood, old and recent, of masses of pigment, and of crystals of hæmatoidin. A similar spot of softening, but much less extensive, existed in the spinal marrow in the neighborhood of the pyramids. The nerves of the brachial plexus had their neurilemma charged

* Valentiner, Loco Citato.

† Virchow, Ein. Fall von progressiver Muskelatrophie. (Virchow's Archiv. 1855.)

‡ Dumesnil, Union Med., 1862.

with fat, and they were the seat of an abnormal pigmentation.*

In the case of M. M. Herard and Luys, along with a considerable atrophy of the left anterior roots, on a level and beneath the brachial swelling, there was a profound alteration of the grey substance; well pronounced varicosities, abundance of amylaceous corpuscles, and the disappearance especially of the nervous cells of the anterior cornua at the emergence of the atrophied root; at the same height also the nervous cells were not easily distinguishable.†

The observations of Gull show, one of them a deposit of granular bodies, the other an atrophy of the grey substance of the fifth cervical nerve up to the fourth dorsal, with enlargement of the central canal;‡ finally the case of Clarke revealed still another variety of lesion which occupied this time the grey substance, and the commissure of the grey cornua posteriorly.‖

You see, gentlemen, that the observations do not fail to come under our second chief classification; observe then a second proposition, no less solidly established than the first; in progressive muscular atrophy, there are observed profound lesions of the marrow, especially of the grey substance, with or without concomitant atrophy of the roots.

III. *Lesions of the Sympathetic.*—These facts demonstrate the existence of this alteration; the first dates from 1854, and appertains to Schneevogt.§ I have observed the two others in

* Frommaun et Leubuscher, Ein. Fall von atropia musculares progressive. (Deutsch Klinik, 1857).

† Herard et Luys, Gaz. Med., Paris, 1860.

‡ Gull, Guys Hospital Reports, 1859–62.

‖ Lockhart Clarke, Archiv. of Medicine, III., 1861. The clinical relation of the case is from Gairdner. In 1863, Clarke published another case of lesion of the grey substance, the alteration especially involving the anterior segment of this substance and the posterior cords. As in the case of Dumesnil, cited above, the atrophy had been coincident with the phenomena of ataxia. (Brit. and For. Med. Chir. Review, 1862.)

§ Schneevogt, Geval van paralysie progresive atrophique, (von Cruveilhier) Nederlandsch Weekblad voor Geneeskunde, 1854.

1864, and the anatomical relation has been published in full in the Bulletins of the *Societe Medicale des hopitaux*, and in the work already quoted of my friend Doctor Simon. In the case of Schneevogt, the fatty degeneration of the sympathetic occupied the cervical and dorsal cords; in mine it was a fibro-fatty degeneration occupying the cord bordering on the neck, the superior cervical ganglion, and the branches anastomosing with the marrow upon at least one of the subjects. There existed, besides, a commencing atrophy of the median nerves; these are the only peripheric nerves which were examined. In these three cases, atrophy of the anterior roots existed in divers degrees, but the marrow was sound.*

IV. The negative autopsies, as they are called, are very numerous, and to speak only of those which have been completed by a microscopical examination, I can cite you to the cases of Oppenheimer, of Merson, Hasse, Friedrich, Friedberg and Cohn. But in all these cases the marrow and roots only were examined, and the knowledge which we to-day have of the possibility of a lesion of the sympathetic divests these cases of the absolute value for a long time attributed to them.

From this retrospective examination, which I have abridged, though presenting you the principal elements, I conclude unhesitatingly that progressive muscular atrophy is a disease of the central nervous system, and to be more precise, of the spinal apparatus. I would recall the fact, gentlemen, that a thorough study of the symptoms has already imposed this conclusion. I have already pointed out to you the importance from this point of view of the anæsthesia, the exaggeration of reflex excitability, the disturbances of electric excitability, and the paroxysmal changes of temperature; I shall not insist upon these points further. The spinal apparatus, and I comprehend likewise under this denomination the sympathetic system—the spinal apparatus is certainly, then, the point of departure of these ac-

* Jaccoud, Sur deux cas d'atrophie musculaire progressive, (Bullet. de la Soc. Med. des Hop. Union Medicale, 1864.)

cidents. But as the malady can kill with producing either anæsthesia or paralysis, properly so called, or disorders of reflex excitability, we can speak with further precision; we can affirm that in the simple cases the organs of sensational and motional innervation are not the cause, and that the anatomical seat of progressive muscular atrophy is in the trophic or nutritive nervous system.

This conclusion would not have all the solidity I desire to give it did I not take care to do justice to the principal objections which have been opposed to localizing the malady in the nervous system? A prime argument has been drawn from the mode of distribution of the muscular lesions; how conceive, it has been said, so irregular a dissemination of the atrophies if they depend upon the nervous system? how does it happen that all the muscular sphere of a nerve is not attained at the same time? how, especially, comprehend the fact that homologous muscles of the two sides almost always undergo lesions successively? This argument, gentlemen, does not affect me; it only bears upon those who have sought to localize the malady in the peripheral nervous system. Such an interpretation is powerless, indeed, to account for the dissemination of the peripheral lesions, and especially the symmetrical progress of the atrophy from one side to the other; nothing, on the contrary, is simpler than the explanation by the formula which I have given, disseminated in all the length of the marrow at points, unfortunately, not yet determined, the trophic centres can be affected in greater or less numbers; hence the atrophy of certain muscles and the integrity of others; then the centres of trophic innervation of homologous parts of the periphery are necessarily very nearly approximated the one to the other in the interior of the marrow, and it may be very well conceived how a lesion at first limited to certain trophic cellules of the upper right limb ought, if it extends, to gain the corresponding points of the left side; bilateral atrophy, symmetrical and successive, would then be nothing surprising.

Furthermore, the justness of this view is demonstrated by the fact that the muscular atrophy remains partial when the lesion

of the marrow is itself very limited. I can cite you upon this subject three strongly corroborating cases. One of them, which, from Traube, is that of a man who, in consequence of an osteo-vertebral sarcoma, presented a considerable atrophy of the hands and fore-arms. On autopsy, the eighth cervical vertebra was found transformed into a spongy mass; the marrow appeared compressed to its level; nevertheless, the compression, if it was real, had been insufficient to produce paralysis; but in this point the white substance had been affected (*sic.*), and the posterior cornua of the grey substance was the seat of a marked hyperæmia.

The second case has been seen by Washmuth. It occurred in a young girl who had a tumor of the cervical region. On autopsy it was demonstrated that the marrow had been compressed and softened beneath the cervical enlargement; the left anterior roots had been reddened and atrophied, the spinal ganglia of the same side were projecting out, and lost in the morbid production. Now, during her life, this young girl had presented a muscular atrophy, attacking her right hand, and it was not until later that paralysis had been added to the atrophy.

The patient of Lebert had an atrophy of the four extremities without paralysis. On a level with the second dorsal nerve there was found a tumor occupying the whole thickness of the marrow; exteriorly the organ appeared sound.

Thus in these cases the partial atrophy was dependent on a partial lesion of the marrow, and in all three the lesion was comprised between the eighth cervical and the second dorsal nerve; that is to say, it occupied a region in which one of the centres of the sympathetic system is positively demonstrated. Far, then, from being an objection to our way of viewing it, the distribution of the muscular lesions at the periphery pleads triumphantly in its favor.

The second objection is still less grave, for it is based upon the forgetfulness of a normal anatomical fact; it invokes the absence ordinarily of paralytic symptoms to contest the primor-

dial influence of the lesion of the anterior roots and the central parts which give origin to them. It is forgotten, in formulating this proposition, that the anterior roots contain two orders of filaments—motor filaments, properly called, and sympathetic filaments, which represent one of the origins of the nerve of that name; it is then evident that if the disease remains limited to the vegetative nervous system there will only be observed trophic symptoms, without any disorder of motility or sensibility. Never lose view of this anatomical fact; an anterior root may be markedly atrophied without a single motor filament being compromised; all by the sole disappearance of the sympathetic filaments which enter into its composition. The presence of these filaments in the spinal roots, as a consequence, demonstrates this other fact, that every spinal nerve called mixed is formed in reality of three orders of filaments—motor filaments, sensitive filaments, sympathetic filaments, vegetative or trophic, as you may please to call them. It is the lesion of these last filaments or their origins, the lesion of the sypathetic, in a word, upon which the muscular alterations depend. Let me cite you a fact in evidence; this proof, mathematically peremptory, which confirms so powerfully the contributions from anatomy, I found in a remarkable observation of Dumesnil, to which there has not been given *in this connection* sufficient attention. A man fifty-three years old succumbed to a disseminated muscular atrophy predominating on the left side, and a motorial paralysis of the face and tongue; the anterior roots of the rachidian nerves are notably atrophied; the hypoglossal and facial nerves, those of the eleventh pair, are also atrophied in divers degrees, a fact well accounting for the lingual and facial motorial paralysis; but despite the nervous atrophy, the muscles of the face and tongue are intact, they are not atrophied.* The able observer, to whom we owe this fact, saw very well the difficulty, he attracted attention himself, to

* Dumesnil, Atrophie des nerfs hypoglosses, faciaux, etc. (Gaz. hebdomad, 1869.)

this striking opposition between the effects produced upon the muscles by the atrophy of the spinal nerves and by that of the cranial nerves; he endeavored to give an explanation, and he invoked the functional difference of the anterior roots of the rachidian nerves and the cranial motor nerves. Now, gentlemen, it is to anatomy that we must go to demand the reason of this remarkable opposition, and it will respond to us, and this this response will suffice of itself to justify our localization of the malady in the sympathetic system. It is by the ganglia of Gasser and the trigeminals that the sympathetic distributes itself to the face. Now, in the preceding instance the nerves of the fifth pair were sound, that was expressly noted; on the other side the facial nerve, it is true, contained vaso-motor filaments; but these filaments were coming from the pneumogastric, and not the sympathetic. This fact, discovered by Schiff, shows conjointly with the preceding, that despite the atrophy of the facial nerves, the hypoglossal, and the spinal, the sympathetic was not interested, there was then no reason for the muscles becoming atrophied; indeed, they were not atrophied. In return, the anterior roots of the rachidian nerves, containing a great number of sympathetic filaments, it is by them that the filaments are distributed to the trunk and members, their lesion has had its ordinary effect—to wit, a generalized muscular atrophy; and as the lesion of the roots—that is to say, of the sympathetic, I again repeat it, predominate on the left side, it is also on the left that the muscular degradation is most advanced.

A third objection has been drawn from the variability of the nervous lesion as to its seat. The fact is true, and I have cited you to the very contradictory observations thereupon. But what does this prove? Simply that the nutritive nervous system can be affected in divers points of its extent, and there is nothing in this surprising to us. It is known that the sympathetic has its roots in the grey substance of the spinal marrow, and that these roots are in *echelon* in all the height of the spinal axis; we know, besides, that to gain the cord and the periphe-

ral ganglia, the radical filaments of the sympathetic gain a passage-way from the anterior and posterior spinal roots; it is then easy to foresee that the nutritive nervous elements can be altered, either in their interspinal track or after their emergence, and the argument drawn from the inconstancy of the seat of lesion is by this singularly compromised. I am not returning again to the objection drawn from the absence of the lesion; I have already shown you that the autopsies called dumb could never have well been negative, excepting because they were incomplete.

The preceding pathogenetic doctrine has already been formulated: Barwinkel, Remak, and Benedikt, have themselves localized progressive muscular atrophy in the sympathetic system, I would tell you; but I can say, also, that this interpretation has up to now been based solely upon inductive reasoning, and that it had not been demonstrated; the anatomical, physiological, and pathological proofs which I present you, constitute this demonstration, and, I hope, establish it completely and definitively.

I would, besides, remark to you, gentlemen, that this doctrine renders an admirable soluton of certain symptoms more or less frequently found in muscular atrophy; it only can explain the pains and enlargement of the bones pointed out by Remak; the variable disturbances of temperature; the contraction of the pupils observed by Barwinkel, Voisin, and Bergmann; it alone permits the conception and coupling of the paralysis or troubles of sensibility from atrophy, properly so called, and the production of muscular atrophy in the course of certain limited lesions of the posterior system of the marrow, in *tabes dorsalis*, for example; it suffices for the first phenomenon, that the alteration passing from the sympathetic system encroaches upon the motor or sensitive elements; it suffices for the second fact, that the posterior spinal atrophy passing from the white cords, affects either the grey cornua or the sympathetic radical filaments, which take the course of the posterior roots. One comprehends also, by this, how it is that the clini-

cal picture of progressive muscular atrophy should not always be so clear or so uniform as the first descriptions might have led us to suppose, since it is sufficient to disturb this uniformity and to obscure these characteristic traits, that the striking lesion of the sympathetic system, in its intra-medullary portion, should only in a slight degree extend beyond its limits.

The prognosis which I enunciated in the commencement of this study frees me from any long development of the treatment of the malady; nevertheless, I wish to direct your attention to the relation which has existed in certain cases between muscular atrophy and syphilis; a cure then has been obtained by means of iodide of potassium; the facts of Niepce,* and of Rodet† relate to this category. In two other cases reported by Taylor‡ the same medication gave a complete success and a sensible amelioration, although the patients did not appear to have had syphilis. These results ought not to be lost sight of in practice. An individual treated by Jakob‖ was cured by the use of cod-liver oil and tonics; but the atrophy in this case was generalized, and furthermore it appeared to have followed onanism and seminal losses, so that it might have been that he was suffering simply from an emaciation. As to common progressive muscular atrophy, that which is developed under cold or humidity and excessive fatigue, that defies all pharmacetic agents; only electricity has sometimes succeeded. M. M. Duchenne and Gros, (of Moscow)§ have had some success with localized Faradization; but now that we are certain regarding the anatomical seat and the pathogeny of the disease, it would be best to resort from the beginning to the employment of the constant current, applied according to the method of Remak, which

* Niepce, Union Medicale, 1853.

† Rodet, Eoden loco., 1859.

‡ Taylor, Cases of Wasting Palsy. (Med. Times and Gaz., 1863.)

‖ Jakob, Fall von gehuller all gemeiner atrophie. (Schweizereische Leits. from Heilkunde, 1865.

§ Gros, (de Moscow), De l'atrophie musculaire progressive au point de vue de traitement. (Gaz. hop., 1855).

consists in placing the copper pole upon the cervical vertebræ, and the zinc pole upon the region of the sympathetic of the neck. Some cures have been obtained by this treatment; they have been the cases of Remak and Benedikt.*

At the time of these pages going to prees, the 12th of December, that is to say eight months after the preceding lecture, I have again seen this patient, her state has become greatly worse; the groups of muscles primitively spared by the atrophy are affected, but in a less degree than the others; those which have become affected from the beginning are scarcely recognizable through the skin. The clawed condition always exists in the right hand, it has disappeared in the left, which is to be attributed to atrophy of the flexors; this hand is inert, and remains in a state of passive extension; the intercostals are commencing to be lost. Besides, the phemonena of paralysis, properly so called, are manifest; whilst the patient can still mantain herself upon her legs and take a few steps, she can execute no movements with the upper limb. The muscles which have preserved most of their volume remain inert under the excitation of the will. As the electric contractility is good, it is clear that the origin of these additional paralytic phemonena is in the marrow, and not in the periphoric nerves, and this tends also to prove the perfect conservation of sensibility. Since these new symptoms, I think that this case belongs to the second group which I have established in pathological anatomy. The first lesion affected the sympathetic system in its intra-spinal regions; hence atrophy, which alone existed for several months; then passing the these limits it affected the motor elements which enter into the composition of the brachial plexus, and hence the secondary paralysis of the upper limbs. The cold persists, as in the past, more marked on the right than the left side.

† Remak, Benedikt, Loco citato.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

Proceedings of Louisville Obstetrical Society. Reported by W. H. Newman, M. D.

Dr. Octerlony reported a case of great interest, which gave rise to the remarks following:

The report will be published in full next month. The points of greatest importance were these: vaginismus and sterility, afterwards, pregnancy complicated with whooping-cough, for which belladonna was administered; profuse leucorrhœa, etc. The child did not suffer from ophthalmia.

Dr. Newman thought that Dr. Marion Simes attributed vaginismus in all, or most all, of the cases to a hyperæsthesia of the hymen, and claimed to cure his cases by removing every portion of the irritable hymen. Dr. Newman has at this time a patient under treatment, a young girl sixteen years of age, who has such an extreme hyperæsthesia of the vulva that she cannot bear to be touched without the most agonizing pain; so much so that she will scream and almost jump from the bed or table when the hand touches the vulva. He thought there was no spasmodic contraction of the sphincter vaginæ in this case, but only an extremely morbid sensibility of the parts. She had white-of-egg-like discharge and copious menstruation. There was no redness, he thought, no inflammation of the vulva. He did not know how to account for this hyperæthesia.

Dr. Octerlony thought the most interesting fact in the case he had reported related to the action of the belladonna in rendering the labor comparatively painless and easy. He further remarked that he had entertained some fears lest the child, in passing through the vagina, might get ophthalmia from the discharges of the mother; but no such accident had occurred.

Dr. Brandeis stated, that in the month of September he had seen a woman five or six months advanced in pregnancy. He believed she had gonorrhœa at the time. When called to assist her in her labor, not being certain that the gonorrhœa had been entirely cured, he was afraid the child would receive specific ophthalmia. He caused the nurse to wash out the vagina with water and sponge, all that could then be done. But finding, as the labor advanced, that the bag of waters was slow to rupture, it occurred to him to allow the child, if possible, to be born without a rupture of the membranes. This actually was the case. The head was at the vulva, ready to emerge from the outlet before the membranes gave way, and the child escaped ophthalmia. He would suggest that in cases where ophthalmia was feared, and where, fortunately, the membranes were stout, as in this case, it would be proper to allow the membranes thus to protect the eyes of the infant against this cause of ophthalmia.

Dr. Newman suggested the fact that the child was almost born before the membranes gave way might not be due, as Dr. Brandeis had suggested, to an unusually stout condition of the membranes. It might, he doubted not, be due to the very soft and relaxed state of the passages caused by the long-continued inflammation and copious discharge from the vagina, which depleted and relaxed the parts.

Dr. Anderson inquired of Dr. Brandeis whether he ascribed purulent ophthalmia in every case to gonorrhœal matter.

Dr. Brandeis so regarded it, and believed the authorities on ophthalmalogy so regarded it.

Dr. Anderson doubted this; he had frequently seen cases of severe ophthalmia nascentium in infants whose mothers he was not at all prepared to suspect of having gonorrhœa; moreover, the ophthalmia yielded readily to treatment, whereas it is known that gonorrhœal ophthalmia is most difficult to cure.

Dr. Hornor believed that the ophthalmia in infants was frequently caused by allowing the strong soap with which they

were washed to be rubbed in the eyes. He also thought that a too intense degree of light was capable of producing ophthalmia.

Dr. Forrester remarked that he had seen the internal administration of belladonna recommended by writers for the purpose of producing dilatation of the os uteri; that he had, in fact, so adminstered it himself in two or three cases of abortion, but that his experiments were unsatisfactory, he believed these abortions were rendered less painful by its use. He could not agree with Dr. Brandeis as to the cause of purulent ophthalmia. This disease, he thought, sometimes prevails as an epidemic. It could not in epidemic cases be communicated by specific virus.

Dr. Brandeis did not desire to be understood as saying that every case of inflammation affecting the eyes of infants was due to gonorrhœal matter. Many causes produce ophthalmia in infants. But the "purulent ophthalmia," so called, severe in grade, and pursuing a rapid course, and attended with copious purulent discharge, he considered was always due to gonorrhœal infection.

GLEANINGS FROM THE MINUTES OF THE MEDICO-CHIRURGICAL SOCIETY, LOUISVILLE, KY.

Surgery and Pathology.—Dr. Morton exhibited a beautiful and delicate specimen of intestine taken from the body of a man who had been stabbed in the abdomen. The intestine, which was cut by the murderer's knife, was stitched with saddlers' silk, continuous suture in the usual manner. The specimen showed the stitches covered with recent lymph; there were no evidences of peritonitis on the surface of the specimen. Judging from the condition in which the intestine was found, it was reasonable to suppose the man might have recovered from the abdominal wound. He died from another wound in the stomach, by which some arterial branch was severed, the hæmorrhage causing death. Dr. Morton thought that the layer of lymph took the place of the coats of the intestines, while the stitches ulcerated their way inwards.

Dr. Gaillard mentioned the case of a soldier who had been wounded in the abdomen, from which about sixteen inches of intestine protruded; six inches of the mangled and soiled intestine were cut off, and the union of the parts accomplished by the silver suture continuous. It was thought that the man would certainly die, but he recovered perfectly with the loss of six inches of his bowel. Dr. G. thought the great fear and dread formerly held in regard to a wounded peritoneum had been a bugbear to the profession in abdominal surgery. He mentioned a case of ovariotomy in which the peritoneum was dissected, to a material extent, from the abdominal wall, the peritoneum being mistaken for the adherent sac of the tumor. It would be difficult to conceive of more injury being done to the peritoneum had there been an effort to do so, and yet this was one of the few successful cases that have occurred in this State.

Dr. Gaillard related a case which he had seen recently in consultation with Dr. Holloway, a lad suffering from an old dislocation of the head of the femur into the thyroid foramen; the foot, however, contrary to the general rule in such dislocations, being everted. Evidences of necrosis of the bone had existed for a long time, the thigh being perforated by numerous sinuses, the discharges from which had greatly exhausted the patient. Excision of the head of the bone was determined upon, and during the operation (performed by Dr. Holloway) the head was found detached from the neck, and lying in the thyroid foramen. Whether the fracture was the result of necrosis or not, could not be determined, as the bone had been bathed in pus for a long time. The patient is making a good recovery. Previous history of the case obscure.

Dr. Gaillard made mention of an interesting case seen in consultation; this case was supposed to be one of irreducible scrotal hernia, and pronounced such by experts. Operation for the relief of the patient was determined upon, when it was suggested that the tumor be punctured with a hypodermic needle to evacuate the gas, and thus facilitate reduction. The case proved to be one of encysted hydrocele of the cord, with great

tumefaction and induration. All of the medical advisers had been deceived, himself included, until the use of the hypodermic syringe induced a correct diagnosis. It should be mentioned, in justice to all concerned, that this patient had suffered from hernia since the period of early childhood.

Dr. Satterwhite made mention of a similar case in which the the operation was performed for a supposed irreducible hernia, but when the incision was made it was found to be a case of hydrocele.

Dr. Forrester related a case of an old negro sixty-five or seventy years of age who had, for a long time, suffered from hernia, and had worn a truss. Symptoms supposed to be those due to strangulation coming on, operation was determined upon, and hydrocele was found to coexist with the hernia, but no strangulation could be detected.

Dr. Gaillard thought that some importance should be attached to the fact that a bad truss might produce hydrocele.

Dr. Wilson reverted to a case of strangulated hernia he had sometime ago reported, in which he had used strong coffee, with the effect of producing complete relaxation and subsequent easy reduction by taxis. He had noticed that while the patient was under the influence of the coffee, the pain caused by the manipulation of the tumor was very much diminished. Dr. Gaillard stated that several similar cases with similar results had been reported.

Dr. Larrabee then read the following paper upon the use of

DIGITALIS IN MANIA A POTU:

I base my remarks in favor of the use of digitalis in this formidable disease upon the close observation of twenty cases treated by this remedy alone. Nearly all of these cases had been subjected to other medication and treatment before I was called, but without avail, and in most of the cases several sleepless days and nights had been passed, so that when I saw them they were in the most marked, as well as exhausted, stage of the disease, with pulse rapid and weak. In one of the twenty cases

referred to, ʒii. of hydrate of chloral had been given during one night without any permanent good effect. The tr. of digitalis, which was given in all these cases, was of reliable strength, and in doses never less than ʒss. nor more than ʒi., repeated if necessary.

I have always made it a point, while treating cases with this remedy, to watch the patient more closely than I would under other treatment, always giving the medicine myself.

In no case was there any toxical effect of the drug, but in all cases the sleep which followed was sweet and refreshing. In no case on waking was the delirium again present. It has been seldom necessary to go beyond the second dose, and in four instances only one dose, ʒss., was administered. I offer no theory, only wishing to submit facts. The ordinary action of digitalis in controlling the force of the heart's beat is well known, and its action in cardiac disease has often been discussed by this Society. But how is this accomplished?

Does it not act upon the net-work of nerves, which govern the whole arterial system? I am willing to accord to this remedy the power of strengthening feeble hearts, and regulating them. So far from depressing, it increases its tone and power. I am not aware that it is capable of curing internal inflammations, such as pneumonia, etc., but in such cases with excited circulation I have been pleased with the action, and have never seen it do harm. The old explanation of the modus operandi of this drug, I think, cannot be true—viz., that it lowers the circulation, thus relieving the venous circulation, for we have seen the heart beat with more force under its use, the blood circulates more quickly, and consequently is brought into closer contact with the excreting organs, allowing the water to be excreted from the blood. It seems to give the best satisfaction when the pulse is feeble or intermittent, face pale, cold skin, etc.; old age and a fatty heart must then contraindicate its use, and just here is liable to occur a difficulty, for it is by no means an easy matter to say what heart is fatty and what not, nor is it easy to say to what extent this degeneration is carried on. This is no more

an objection to this remedy than would exist in the universal application or administration of any other potent and deserving remedy in disease.

If I had reason to suspect such trouble in the circulatory system as I have mentioned, or should the heart's action be very feeble, I would commence with a small dose, and perhaps combine a diffusible stimulant, such as ether or ammonia, and watch its effects, increasing the dose or witholding it altogether, if need be. If in the treatment of delirium tremens I had reason to believe the debauche to be recent, and the stomach filled with food and alcohol, I would give a brisk purgative, combining calomel and colocynth, and, perhaps, a drop of croton oil. I am not among those who regard delirium tremens as due to the sudden withdrawal of stimuli, but rather look upon it as a fresh excitement upon a brain already before weakened by alcohol. Entertaining this view, I do not give my patients stimulus or whisky, but allow in its place abundance of nourishment, always being careful to impress upon the minds of friends and attendants the importance and necessity of feeding.

Dr. Brandeis alluded to a recent theory of the action of digitalis by dilating capillary veins, and relieving the heart of the impediment which it has to overcome. He also mentioned a case of delirium tremens he had lately treated by one-eighth-grain doses of sulphate of morphia, combined with fifteen grains of hydrate of chloral, repeated every two hours, with complete success.

Dr. Gaillard thought the good effects of digitalis were due to its imparting to the arteries and arterioles the same tonic effect which it imparted to the heart; removing thus passive congestions of the capillaries.

Dr. Satterwhite related a case of delirium tremens which he had recently treated successfully by large draughts of the infusion of wormwood, in which morphia had been previously given without relief.

Dr. Forrester alluded to the great difference in strength he

had found in the different preparations of chloral he had used. Other members had noticed the same fact.

Gynæcology.—Dr. Brandeis reported the progress recently made in Europe with the hypodermic injection of ergotine. The conditions in which the treatment promised to be of most service were dysmenorrhœa, menorrhagia, and long-standing cases of retained placenta after abortion, dead fœti, etc. He also mentioned two cases of version completely relieved by its use. The report is based upon the treatment of twenty cases of the above-mentioned diseases, all with the most perfect success. The injection of the remedy was followed in about a half hour by strong uterine contractions.

Dr. Wilson thought that the time required in these experiments to produce the effect did not correspond with the general experience in the hypodermic use of other remedies. He considered swiftness and certainty of action one of the chief advantages of that mode of administration.

J. A. LARRABEE, M. D.,
F. C. WILSON, M. D.,
Committee on Publication.

T. P. SATTERWHITE, M. D., President.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

VICKSBURG, MISS., January 26, 1871.

E. S. Gaillard, M. D.:

Now that medical journals throughout the country contain accounts of the evil, and sometimes fatal effects which result from the use of chloroform as an anæsthetic, I think it behooves

every physician to take notice of such statements, and also to promptly report any case coming under his own observation; more especially as I believe some of our medical brethren are collecting statistics relative to the effects following the inhalation of chloroform.

A case in hand has recently come under my notice in the practice of my friend, Dr. C. J. Mitchell, of this place. The patient, a female, aged thirty, presented, on examination, no derangement of the internal organs, her general health being good, with the exception of a pain occasionally experienced from an ulcer situated on the unguinal extremity of the great toe, the nail being buried to some extent in the flesh of the part, and the extirpation of which it was proposed to accomplish while she was under the influence of chloroform.

The Doctor having requested me to administer the anæsthetic, I proceeded to do so in the usual way.

The patient's pulse, before commencing, was accelerated, owing to her timidity, but under the anæsthetic's influence was reduced to its normal action, becoming a few beats lower during continuance.

We found it difficult to bring the patient fully under its influence, so much so, that after she had inhaled nearly an ounce, was still able to respond to questions put in a loud tone of voice.

Not deeming it necessary to wait longer, the Doctor proceeded with the operation, occupying about three minutes; patient manifesting consciousness by two or three moans. I withdrew the chloroform as soon as the operation was concluded, patient apparently only stupefied.

A few moments later, the side of the patient, corresponding to the one operated on, became suddenly convulsed, fore-arm flexed on the arm, fingers closely contracted on the palm, muscles of the lower extremity, of the same side, rigid, but the limb not flexed; on the opposite side a rigid state of muscles existed, but no convulsive movements. Shivering set in, her teeth chattered, in fact, going through all the phenomena of a chill, and yet the patient, during all this time, was able to respond to any

question asked. These convulsive movements continued, at intervals, for about one hour; respiration reduced to fourteen, pulse sixty, extremities cool.

Stimulants were given, warmth applied to the extremities, cold water sprinkled on the face, the shock of which appeared to arouse her, but she would soon relapse into her former state.

This condition continued for two hours, at the expiration of which time she came to, being only able, though, to respond to questions in a whisper; that too passed off, and the next day the patient was fully restored.

My friend, Dr. Mitchell, having given chloroform in several hundred cases, and having given it myself on many occasions, with no effects like the above witnessed, I thought, perhaps, it might prove of interest to your readers, and also prompt the publication of such facts on the effect of chloroform inhalation as may yet remain unpublished; thus giving opportunity to those who are collecting information on that subject an ample field for investigation.

Yours, truly,

R. Arnot Quin, M. D.

Fayetteville, N. C., 1871.

Dr. E. S. Gaillard:

Dear Sir,—Allow me to suggest that the *specimen or sample* of Mrs. Winslow's Soothing Syrup, as analyzed by your associate and reported as containing *no opiate*, must be of a different kind from that sold in this region, as I have myself seen two cases of severe narcotism in children within the past two years after its use.

Respectfully,

T. D. H.

Augusta, March 13, 1871.

Prof. E. S. Gaillard:

Dear Sir,—In my operations for ovariotomy I have for the present left my well-to-do standpoint of caring for the *ligature outside* the wound, and gone over to the Tyler-Smith method of

ligating the stump, cutting both pedicle and ligatures short, and returning them into the abdomen.

In the last two operations, of thirty-one completed operations, and three deaths, (all by the ligature), I cut short the ligature of the pedicle and adhesions in both cases, and returned them into the abdomen; one is completely well, and the other walks about the house; one of the patients required *eleven* ligatures to the adhesions, the other *six*.

One, the patient of Drs. Dobyns and Downing, of Sardis, Mason county; the other of Bracken county; assisted by Drs. Sharpe and T. T. Bradford.

J. TAYLOR BRADFORD, M. D.

NOTE.—Several long and valuable letters are omitted for want of space. They will soon appear.—ED.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

ART. I.—NATIONAL MEDICAL JOURNAL. Edited by CHRIS. C. COX, M. D., LL. D., Professor of Medical Jurisprudence and Hygiene in Georgetown College. Washington, D. C.: Judd & Detweiler. Nos. 1, 2, 3, and 4. Octavo, pp. 520.

This magazine is handsomely printed on fine paper, and is published in Washington. The contents of this new medical Quarterly are classed under these headings: "Original Papers," "Collectanea," "Clinical," "Necrological," and "Editorial." So much of our medical periodical literature being of provincial origin (and may be characterized, without discourtesy, as truly rural) it is a source of congratulation that we have at last a really metropolitan medical serial to direct the medical mind of this country.

In the four numbers of the "National Medical Journal" that have been issued, we find many original articles of great merit, and the *national* character of the publication is strongly put in evidence. In the first number is an editorial on the "American Union Academy of Literature, Science, and Art," an institution recently founded in Washington, and one whose glory, distinction, and longevity, have never been surpassed, except by an organization of a somewhat similar name in Louisville, Ky. The institution consists of ten departments, one properly devoted (under the presidency of Dr. C. C. Cox) to "Medical Science and Art"; an article on "American Women"; an article on the "American Medical Association"; an article on the "United States Marine Service"; a "Lecture at the Columbia Hospital," and contributions from the Medical Department of the United States Army, and the Medical Department of the United States Navy. A national journal truly.

In the second number the national and metropolitan character of the "Journal" is fully sustained. The minutes of the American Medical Association are reproduced, and a discussion on color in the National Medical Society is noted. This national volunteer Medical Association "is already assuming large and imposing proportions," and is intended, while promoting scientific inquiry and the high standard of medical intelligence, to keep alive the *esprit du corps* (*sic.*, p. 222) of a large and able class of gentlemen who served during the late war. Dr. C. C. Cox is the honored president of this worthy Association.

In this second number we find an account of the meeting at Washington in honor of the memory of Sir J. Y. Simpson, with the account of "a highly effective piece of oratory" by Dr. C. C. Cox, in eulogy of Dr. Simpson's breakfasts, which, very pardonally, made a lasting impression upon the mind of the eloquent orator.

The third number is of the same national character. The two leading (so-called) "original" articles are reproductions of Dr. Woodward's well-known papers on histology and micro-

photography, published by the Surgeon-General of the United States Army.

The editorial matter treats of the National Association of Volunteer Surgeons, and furnishes the minutes of the interesting meeting, in which its constitution was adopted, at the office of Dr. Cox.

In the fourth number we find that the "National Convention of Volunteer Medical Officers, advertised to meet in Washington," has been postponed till February; but retired volunteer medical officers may be consoled, for this hope deferred, by the honor paid to one of their number (Dr. J. H. Thompson), to whom the award of a medal of honor is stated to have been made "in conformity with a special act of Congress."

We have been told that Dr. J. H. Thompson was dismissed from service at Newbern, N. C., and upon being subsequently appointed surgeon of the 139th New York volunteers, his commission was vacated under unpleasant circumstances. This recent tardy reparation to such a representative of the volunteer medical staff will be fully appreciated by those medical officers who served in the Carolinas and on the Peninsula.

We learn that it is proposed to found in Washington a National University, with Dr. Cox as one of the corporators. This will include a National Medical School, and as a large land-grant is asked for in support of the institution, it will doubtless prove a successful enterprise; at least as long as the received value of the land is unexhausted.

The advisability of centralization in literary, scientific, and political matters, is yet a subject of discussion; but there can be but one opinion as to the value of a National Medical School if the basis of its future operations be formed and controlled by the distinguished and worthy editor of this very distinguished National Medical Quarterly.

The physicians of Washington, who are so fortunate as to have this great periodical and confessedly great editor in their midst, owe it to themselves and to the honor and dignity of medical science to have the author of the following libellous

lines (which have appeared before the entire Washington public) summarily pilloried; and if he endures this just, this ruinous ordeal, he should be compelled to read every number of the "Journal" edited by the distinguished personage whom he has so cruelly and terribly abused. He has perpetrated a sad and cruel blow, and fully deserves the condign punishment indicated.

These scathing lines appeared in one of the secular papers published at Washington. Dr. Cox has always played a conspicuous part whenever the graves of Federal soldiers are decorated, and it is useless to disguise the fact, so well known, that the physician herein so mercilessly satirized is, himself, M. D., LL. D., etc., of Washington; one whose record as a physician, a poet, a patriot, a soldier, a distinguished candidate for the presidency of the American Medical Association, etc., is so justly and fully appreciated as to render its description unnecessary. The author of these lines assumes Dr. Cox to be dead (physically of course, not morally), and terms these lines

A DECORATION.

"Here are Cabbage heads and Aconite,
For those who brag, but never fight;
And draggled leaves, and flowers dead,
With feathers white, for the coward's head—
And laurels soiled, and mildewed Hops,
To deck the grave of Dr. C——x:
Now, o'er the grave of this suckling poet,
If you have seed of hen-bane, sow it;
Bring, too, a sprig of Judas-tree,
Fit emblem of our LL. D.;
And o'er his tombstone let all bend,
Mocking one false to ev'ry friend;
Then leave him lying, well wreath'd around,
Who lied so well above the ground."

If the Washington physicians do not act promptly in this matter, the duty devolves next upon those of Baltimore; for did not Dr. Cox, with a noble and characteristic disinterestedness, journey to a banquet of these gentlemen, and offer, in a

most laudable spirit of generosity, to become their candidate for the presidency of the American Medical Association immediately prior to the meeting of this Body at Washington in May, 1870? It is well known that the Washington physicians craved for themselves this honor, but, from some technical provision in the rules governing the Association, Dr. Cox's membership as a delegate from Washington precluded him from the enjoyment of the honor; an honor which his Washington brethren were, as is well known, so anxious to impose upon his reluctant and worthy head. Under such circumstances the Baltimore physicians seized joyously the historical opportunity for being honored in honoring this patriotic Marylander, their disinterested guest. If the Washington physicians, therefore, do not act, those of Baltimore would be recreant and ungrateful indeed in not defending their worthy representative.

Journal readers are aware that Dr. Cox has been amusing himself, and endeavoring to amuse the readers of his journal, by attempting to ridicule the "Richmond and Louisville Medical Journal" and its management. The editor of this last work might have endeavored feebly to return blow for blow, but he is unable to measure lances with so valorous a warrior; and being helpless, he palliates his defeat by exhibiting the power and worth of his adversary. Dr. Cox and his journal are confessedly great, and it would be unpardonable in one who so highly and justly respects them to delay any longer in presenting their claims to the admiration and respect of American physicians. No reward is sought for this; not even the overwhelming honor of an exchange with this national monument of the personal worth and professional distinction of a national man. It is a spontaneous offering; an humble tribute to greatness; and the recipient is very welcome to it. In regard to the journal under review and its editor, there can be but one opinion, and as each reader already entertains this, it is unnecessary to record it.

ART. II.—BLOODLETTING AS A THERAPEUTIC RESOURCE IN OBSTETRIC MEDICINE. By FORDYCE BARKER, M. D., Professor of Midwifery and Diseases of Women and Children in Bellevue Hospital Medical College. New York: D. Appleton & Co. 1871.

This interesting and instructive pamphlet is a reprint from the New York Medical Journal. Dr. Barker discusses his subject with conciseness and brevity, and illustrates it with cases. He may (with justice) be said to proscribe the lancet in most puerperal troubles, but in rare forms of puerperal convulsions he prescribes it with boldness and decision. The following extract is interesting and impressive:

"In certain very rare forms of puerperal mania, bloodletting may be of the greatest service. A large majority of these cases are undoubtedly associated with or result from defective nutrition and nervous exhaustion. The following, however, is an exceptional case: In February, 1868, I was sent for to visit a young lady the thirteenth day after her confinement. Her puerperal convalescence had been so free from all unpleasant symptoms that I had ceased to visit her. I found her gloomy and taciturn, a very marked change from her usual temperament, complaining of nothing, and refusing to answer any questions. The nurse informed me that the first symptom, which had occurred a few hours before, was a complaint of pain in one of her breasts, and a refusal to nurse her child, which she had been very fond of doing. One breast was somewhat tumefied, and evidently painful; her pulse was somewhat tense and quickened. The axillary temperature was 103° Fahr. There had been no chill. On visiting her the next morning, I found that she had not slept a moment, that she had not nursed her child, or permitted any thing to be done to her breasts, or taken one drop of drink, one mouthful of food, or a particle of medicine. She was now beginning to talk wildly and rapidly, without noticing any remark that was made to her. During the day I visited her very frequently, and at each visit I found her condition becoming worse. In the night following I found her face flushed, her eyes red, and she had become very violent, with an astonishing display of muscular power. She would tear off her clothes, and scream incessantly, with a constant repetition of certain phrases in such tones, and with such a "damnable iteration," as almost to drive every one crazy who heard her. With great difficulty

her husband, her brother, and the nurse, held her, while I opened a vein in the arm. As the blood flowed, at first scattered generally around the room and on the persons of those of us about her, she gradually became more quiet, sank down on the bed, and fell into a sound sleep while I was bandaging the arm. Nearly five hours after she awoke, at once asked for her baby to be put to the breast, and she was perfectly cured. After this she did not have a single symptom of disease, and her convalescence was rapid. We estimated the quantity of blood taken at about fifty ounces, although so much was lost at first that we could not judge very accurately. In no case have I ever seen the effects of medical treatment so promptly and so happily curative."

ART. III.—THE AMERICAN PRACTITIONER. D. W. YANDELL, M. D., and THEOPHILUS PARVIN, M. D., Editors. John P. Morton & Co., Publishers. 1870.

The two volumes of this journal for 1870 have been received from the publishers. These are bound with rare taste and elegance, and are equal to the best specimens received from New York and Philadelphia Houses. The typography of these volumes is most creditable to the publishers, and is in every respect acceptable and beautiful. It is a source of great pleasure to see that a Louisville House is able to compete in method, elegance, and efficiency, with the best Houses in this country. As specimens of typography and mechanical manipulation, these volumes cannot be surpassed.

ART. IV.—FIRST MEDICAL AND SURGICAL REPORT OF THE BOSTON CITY HOSPITAL. Edited by J. NELSON BORLAND, Physician; DAVID W. CHEEVER, Surgeon. 8vo., pp. 688. Boston: Little, Brown & Co. 1870.

V. *Treatment of Skin Diseases—By Howard F. Damon.*—There is given in this paper the number of cases of skin affections applying for treatment, along with two lithographic illus-

trations and one chromo-lithograph, beautifully representing a typical case of *urticaria annulata*. Though the descriptions of the cases are excellent, contrary to what we would suppose by the heading of the article, the writer has gone through the entire article, saying least of all about the *treatment* of his cases.

Typhoid and Typhus Fever—By J. Baxter Upham.—We have here tabulated in extenso the histories of 152 cases of typhoid fever and 38 of typhus fever. We have recorded in a tabular form the frequency with which the various symptoms of the two forms of fever present themselves with a minuteness which we do not recollect to have seen equaled.

It would seem by these tables that in Boston the old popular name for typhoid fever, viz: "winter fever," is not at all applicable, since we learn that there were admitted into hospital in spring 27 cases, 35 in summer, 74 in autumn, and only 16 in winter.

The three early symptoms most commonly present in the 152 cases of typhoid fever were, chills in 94 instances; headaches, 112; anorexia, 68; the three symptoms most frequently found in the later stages were, rose-spots 109 times; tenderness, 97; tympanitis, 64. Quite contrary to what is taught in the books, constipation was observed in as many as 66 cases. We remember years ago hearing Dr. Austin Flint, in a lecture upon typhoid fever, dwell upon the extreme rarity of a death in the affection when the patient was constipated, and our observations since have all been confirmatory of the statement; but it seems that in the Boston City Hospital it was present in 3 of the 21 fatal cases.

The treatment was not materially different from the ordinary expectant and sustaining course pretty generally in vogue with the profession, we believe, throughout the world.

The average duration of the disease, dating from the first marked symptoms of the fever, to the period when the temperature and pulse had sunk to nearly the natural standard, and there was a craving for solid food, was 34 days. The mortality, as shown above, was 1 death in 7 cases.

The average duration of the *typhus fever* cases, estimating their beginning and ending by the same plan adopted for those of typhoid fever, is more plainly defined generally in the former than the latter affection, for, as the writer says, "The onset of the disease was mostly sudden and severe; the approach of convaleseance was well marked, and heralded by a decided relief and subsidence of the symptoms. It was sometimes accompanied with profuse diaphoresis;" the average duration was 18 days. Of the 38 cases 10 died, showing in round numbers the large ratio of 1 death in 3 cases. The treatment, while essentially sustaining, did not embrace the routine stimulant plan.

The paper is illustrated by thermographic tracings of typical cases of recovery and death from each affection.

VIII. *Reproduction of the Tibia—By David W. Cheever.*—This is an interesting account of a case in which Dr. Cheever removed the entire diaphysis and lower epiphysis of the tibia, with subsequent reproduction of the bone, a useful limb resulting. Since Ollier, in his great work *de la regeneration des os*, has only collected five cases. Dr. Cheever thinks that such renewals are rare, and appends to his article extracts from all five of them at length. In the practice of the late Dr. Thompson F. Craig, of Danville, Ky., we, some years ago, saw almost a precise counterpart of the case which Dr. Cheever has detailed.

IX. *Ophthalmic Report—By Henry W. Williams.*—This is a table and brief report by Dr. Williams of the cases, operations, and their results in the ophthalmic department. Dr. Williams has modified the ordinary operation for cataract by the insertion of a very fine suture at the centre of the wound in cases of flap extraction. Though we believe the method of Dr. Williams has been before the profession for some years, and in his exceedingly dexterous hands has been very successful, yet, if we mistake not, it has met with but little favor in the eyes of ophthalmologists generally.

X. *Report of the Aural Department—By J. Orm Green.*—

The number of patients reported upon by Dr. Green is not large (158), the report covering only four months and a half, however, since the opening of the department. Among the cases of *acute simple inflammation of the tympana*, is one of much interest. A girl aged sixteen, who had been very deaf for years, "requiring a very loud voice within a few feet," entered the hospital with typhus fever, and for some days lost her hearing entrely. "Both membranes were swollen, deeply injected along the manubria, and immovable; the eustachian tubes closed, the throat inflamed. The inflammation was reduced, and the air-douche, by Politzer's method, used for some three weeks, at the end of which time she had not only regained the degree of hearing, which she had before the fever, but had improved so much that she could hear a distinct voice twenty feet distant, and she herself announced that she heard better than she ever remembered to have heard." Dr. Green explains the improvement by supposing that the acute inflammation caused a resorption of old deposits or thickening of the tympanum.

XI. *Two Cases—By David W. Cheever.*—1*st. Encephaloid Tumor of Tonsil.; 2d. Occlusion of the Vagina.*—The first case is related because of the rarity of cancer of the tonsil, and the great size of this—"as large as a pullet's egg,"—and the necessity for its removal by a deep dissection from the outer-side of the neck down parallel with the sterno-cleido-mastoid muscle. The last case was one in which death followed the attempt to make a vagina in a case of congenital absence of the organ. On dissecting up to what was supposed to be the os and body of the uterus, and making an incision to complete the communication with the newly-made vagina, no body of uterus was found, but the peritoneum was entered, and two oval bodies, supposed at the time to be ovaries, but afterwards proven to be the two separated cornua of a malformed uterus, were reached. The patient died of peritonitis.

XII. *Peri-Uterine Inflammation—By A. D. Sinclair.*—This paper is a relation in detail of twenty-odd cases of pelvic affec-

tions, including *intra-pelvic phlegmonous abscess, pelvic cellulitis, pelvi-peritonitis, and peri-uterine inflammation.* The paper, occupying some sixty pages of the volume, is of interest for its simple, detailed history of each of the cases, some of which recovered, and some proved fatal, there being nothing especially new observed in any of the phenomena of their progress, or adopted in their treatment.

XIII. *Surgical Abstract—By David W. Cheever.—1st. Aneurism; 2d. Ligature of Vessels; 3d. Cases of Cut Throat; 4th. Tracheotomy; 5th. Foreign Bodies in the Œsophagus; 6th. Perineal Section; 7th. Lithotomy; 8th. Radical Cure of Hernia; 9th. Strangulated Hernia; 10th. Fractures; 11th. Fractures of Spine; 12th. Compound Fractures; 13th. Amputations.*—The article on aneurism gives an account of those cases of popliteal aneurism operated on, one dying, and an aneurism of the innominate, in which an unsuccessful attempt was made to tie the carotid and subclavian arteries, a failure to succeed being the result in each instance. The first cut over the carotid was followed by such a welling up of such an "inky stream" of venous blood that *feeling* alone was to be depended upon, and the finger failing to detect pulsation, the attempt to ligate the carotid was abandoned. The spine difficulties followed the attempt to ligate the subclavian, and in the attempt to pass the needle, the subclavian vein being wounded, a section of the middle-third of the clavicle was made, and a portion, an inch and a half long, by means of Hay's saw, was removed. The welling out of the blood "of the color of prune-juice" continued to obscure everything, the depression and dyspnœa continued to increase, and the patient appearing moribund; further attempts were abandoned, the wound *plugged*, and the patient died within two hours.

One of the popliteal cases was successfully treated by flexion, another, ninety-nine hours of flexion failing, was cured by acupressure of the femoral. Acupressure of the femoral was used in the third case, and with the cessation of pulsation in

the aneurism, mortification of the limb and death ensued.

The portion of the abstract devoted to fourteen cases of cutting of the throat, with suicidal or homicidal intent, is of much interest. Of the fourteen cases, nine recovered, and five died. Several of the patients owed their deaths "to the pernicious practice of closing the lips of the skin-wound without securing either the vessels or the edges of the wounded air-passages." Says Dr. Cheever: "In spite of remonstrances and published results, we find the same mistake committed year after year by the medical man first called, who yields to the ignorant clamor of the friends and by-standers, and closes up the wound decently at once, thereby subjecting his patient to three distinct perils—viz., to hæmorrhage, to suffocation, or to emphysema." It was observed that those cases in which the wound was *above* the glottis, were more fatal than those *below*, because of the much greater liability to occlusion of the glottis from blood, œdema, or emphysema, in the former instances.

One case is worthy of a little dwelling on just at this time, when men of the eminence of Sir William Fergusson, and Professor Simon, of Heidelberg, aver that the ligatures of silk are no more irritant than the metallic ones, and would have us discard our "silver wires." It is that of a case in which the two wounds in the larynx and trachea were brought together by silver wires passed through the cartilaginous rings. A year afterwards the patient was brought to the hospital severely burned, and died. "An examination *post mortem* revealed the wires still *in situ*, and the larynx and trachea perfectly healed. The living membrane of the air-passage had extended over the loops of the wire which were thus encysted, and had given rise to no symptoms whatever."

The paper on Foreign Bodies in the Œsophagus, with Three Cases of Œsophagotomy, is an epitome of the admirable little monograph which Dr. Cheever published some two years since. In looking over the table of twenty-four cases, very industriously collected from all quarters by Dr. Cheever, and reading the column, "*Treatment before Operation*," we are struck by the fact, that

in not a single instance was the *bristle-probang* used. Let any one examine this simple instrument—one which, by means of a gum catheter, stylet, and some of the hog-bristles, as found in an ordinary brush used in house-painting, can be improvised by any country surgeon within fifteen minutes—let him consider its action when expanded within the œsophagus, how it must dilate to the fullest extent the constrictor fibres, and he can at once imagine its effect in dislodging the most firmly impacted substances, and even those angular ones whose points might be quite deeply imbedded. For instances of the efficacy of this simple instrument, when other means had failed, we refer to the cases which have been published by Drs. Sayre and Cotting. We much doubt whether a half dozen of the two dozen cases in which œsophagotomy was performed would have required it had the bristle-probang been used.

In the operation of *Perineal Section*, Syme's method and that of Cook showed precisely the same mortality—thirty-seven per cent.

In *Fractures* of the skull, the writer says "The ratio of mortality of those trephined was, practically, no better than that of those not trephined; and yet in individual instances we undoubtedly saved life." Colles's fracture of the radius, of which there were 124 cases, was sometimes treated with Nelaton's pistol-splint, sometimes by the straight double splint, and sometimes by Bond's splint. The pistol-shaped splint is described as having been found most unsatisfactory, the straight splint as giving many good results, but Bond's splint as being the most comfortable, and being most reliable when the patient is seen often. Fractures of the femur were, with but few exceptions, treated by what is usually known as Buck's method—adhesive straps, with the pulley and weight attached for extension, counter-extension being made solely by raising the foot of the bed four inches; sand-bags or a long splint outside to prevent rotation, and coaptation splints next the skin being placed on the thigh and secured by straps. Shortening rarely exceeded three-fourths of an inch, frequently less, though no adult escaped

some shortening; there were never any sores or sloughs from the apparatus. This method of Buck, or of Swinburne rather, for, historically, we think that Dr. Swinburne, of Albany, N. Y., is entitled to the credit of its invention, seems now to be the generally-accepted method of this country, for, in visiting the hospitals of Boston, New York, Philadelphia, Baltimore, and Cincinnati during the past year, we found it modified in various slight ways; the one invariably in use, and we think, when we consider its comfort to the patient and the good results usually attainable by it, that humanity and the profession owe Dr. Swinburne a much larger debt than has as yet been generally acknowledged.

In amputations of *Compound Fractures* the custom of the hospital was to wait for *full reaction* to be exhibited before operating. In addition to the different disinfectant dressings used, the writer thus expresses himself: "We do not think it is yet time to decide on the asserted overwhelming merits of carbolic acid. While it was largely used, the hospital was quite free from erysipelas and pyæmia for many months; but cases finally broke out while it was still employed. Again, longer periods of entire exemption from infectious diseases have occurred since, while other dressings were used. Milder dressings for compound fractures gave as good results as carbolic acid, though many bad cases did admirably under its use. During one term of service of four months we dressed every open wound with carbolic acid. We are quite sure it retards granulation.

In Lisfranc's and Chopart's amputation of the foot, the author thinks the *arrangement and intercommunication of the synovial surfaces* is what especially militates against success, suppuration by exposure of this surface being very liable to occur, and from the general intercommunication between the small bones (by this surface) very liable to extend throughout the joint.

In concluding our review of this volume, we express the hope that it may meet with such a welcome among the profession as

its merits entitle it to, and as will encourage the staff to bring fourth its successors at regular periods.

The sale of the Pennsylvania Hospital Reports for the two years they were issued, we are told, was not large enough to justify the publishers in continuing the work. This surely should not be, for the articles generally in these two volumes will compare favorably with the reports of any of the English hospitals, and altogether are an honor to American medicine. What has been the success of the Bellevue Hospital Reports we do not know, but fear since the year has now well advanced since the issue of the first volume, that the experiment has been no more fortunate than that of its neighbor and rival. Of the large number of volumes of reports of the different London hospitals, the one issued by Guy's is the single one which has paid, and this probably because Guy's has had a larger number of students within her walls during the past generation than any of her neighbors, and that they, by their numbers, have yielded a larger support to the works of their Alma Mater rather than because of the very great superiority of the Guy's Reports over those of St. Bartholomew's, St. George's, or the London Hospital.

The medical journals of our English brethren, we observe, discourage these reports, on the ground that the profession would be more generally benefited by their contents being published by the periodical press, but a large portion of what is frequently most valuable in these reports—take the very lengthy statistical tables in the volume now before us for instance—are scarcely proper for a medical journal, but we think are properly enclosed within the covers of a special volume. By issuing a volume every five or three years, and binding it more cheaply, like the London Reports, we hope that the enterprise, which has only lately been started in this country, will yet justify the outlay, as it has done with our brethren of Guy's.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."

BY THOMAS E. JENKINS, M. D.

ART. 1.—RELATIVE VALUES OF THE METRICAL SYSTEM OF WEIGHTS AND MEASURES AND THOSE OF THE UNITED STATES PHARMACOPŒIA.

WEIGHTS.

One milligramme is equal to 1-64th grain nearly.
One centigramme is equal to $\frac{1}{6}$ grain nearly.
One decigramme is equal to $1\frac{1}{2}$ grains nearly.
One gramme is equal to $15\frac{1}{2}$ grains nearly.
One dekagramme is equal to 154 grains nearly.
One hektogramme is equal to 1543 grains nearly.
One kilogramme is equal to 15432 grains nearly.

MEASURES OF CAPACITY.

One millilitre is equal to $15\frac{1}{2}$ grain-measures of water.

One centilitre is equal to 154 grain-measures, or 3 fluid drams nearly.

One decilitre is equal to 1540 grain-measures, or $3\frac{1}{3}$ fluid ounces nearly.

One litre is equal to 15406 grain-measures, or 2 1-10th pints nearly.

One cubic centimetre of water at its maximum density weighs $15\frac{1}{2}$ grains nearly, and is 2-7ths of a fluid dram nearly.

MEASURES OF LENGTH.

One millimetre is equal to 1-25th inch nearly.
One centimetre is equal to 2-5th inch nearly.
One decimetre is equal to 3 9-10ths inches nearly.
One metre is equal to $39\frac{1}{3}$ inches nearly.
91-100ths metre is equal to 1 yard nearly.

RULES FOR CONVERTING CENTIGRADE THERMOMETRIC DEGREES INTO DEGREES OF FAHRENHEIT, AND VICE VERSA.

To convert centigrade degrees into Fahrenheit degrees, multiply by 9, divide the product by 5, and add 32.

Thus—Fahrenheit $= \frac{9 \text{ Cent.}}{5} + 32$, or

$16° \times 9 = 144$. $144 \div 5 = 28.8$. $28.8 + 32 = 60.8°$, which is the degree Fahrenheit corresponding to 16° centigrade.

To convert degrees of Fahrenheit into those of centigrade; subtract 32 from the Fahrenheit degree, multiply the remainder by 5, and divide the product by 9.

Thus—Centigrade $= \frac{5 \text{ (Fah.—32)}}{9}$ or

$60.8 - 32 = 28.8$. $28.8 \times 5 = 144$. $144 \div 9 = 16°$, the degree of centigrade sought.

To convert millimetres into inches for the purpose of comparing the two barometer scales; multiply the height of the barometer in millimetres by 39371, and point off six figures of the product, as a decimal fraction. Thus—

760 m. m. $\times$ 39371 = 29.921960, or 29,922 inches.

762 $\times$ 39371 = 30,000702, or 30 inches.

To convert inches into millimetres, multiply the height of the barometer in inches by 254, and point off in the product one figure, with as many more figures as there are decimal places in the number operated upon. Thus—

29.922 inches $\times$ 254 = 760.0188 m. m.

30 $\times$ 254 = 762.0 m. m.

VARIETIES OF CALOMEL.

Sublimed (yellowish-white) calomel is the mildest in its action of all varieties; the precipitated (snow-white) calomel is the most powerful. Between these two kinds there is another (also of a pure white color), called *calomel a la vapeur*, which, in point of activity, lies between the two former. Microscopical examination shows that sublimed calomel is the least finely divided, and the precipitated variety the most so. Each of these varieties

should be considered as different medicines.—*Hager's Centralhalle.*

A NEW STYPTIC.

Collodion, 100 parts.
Carbolic acid, 10 parts.
Tannin (Pelouse's), 5 parts.
Benzoic acid (from gum), 5 parts.

Mix the ingredients in the order above written, and agitate until perfect solution is effected. This preparation has a brown color, and leaves on evaporation a strongly adherent pellicle. It instantly coagulates blood, forming a consistent clot, and a wound rapidly cicatrizes under its protection.—*Carlo Parvesi.*

INCOMPATIBLES.

Astringent vegetable solutions are chemically incompatible with solution of salts, of quinine, and other vegetable alkalies; and when prompt action of the latter is desired they should not be prescribed in connection with vegetable infusions, decoctions, etc., of an astringent nature.

Oxide of silver forms spontaneously inflammable, and explosive mixtures when associated with easily oxidizable substances, such as morphine, tannin, creosote, etc. When creosote is dropped upon recently-precipitated oxide of silver, it instantly bursts into flame. I have known pills composed of oxide of silver, morphine, and tannin, mixed with a little vegetable extract, to swell, become hot, and emit volumes of smoke within a few minutes after they were made and deposited in the pocket of the patient, to his no little alarm, and the confusion of the apothecary. On examination the oxide of silver was found to be reduced to the metallic state, and the morphine and tannin consumed.

BELLADONNA PLASTER.

A plaster made from the resinous extract of belladonna *root* is superior to that made from the spirituous extract of the leaf in the following respects: It adheres closely to the surface, requires no adhesive margins, and neither runs, exudes, nor stains the linen.

APOMORPHIA—A NEW BASE.

Apomorphia is not an educt of morphine, as it is generally supposed to be, but a product of the decomposition of that alkaloid. The physiological effects of this new base are very different from those of morphia; a very small dose produces speedy vomiting and considerable depression, but this soon passes off, leaving no after ill effects. It is a non-irritant emetic and antistimulant in a hypodermic dose of one-tenth of a grain, or when taken by the mouth in one-quarter of a grain.

DANGEROUS MEDICINES.

The new edition of the Austrian Pharmacopœia requires this mark of caution (†) on the physician's prescription, when medicines of a dangerous character are prescribed, before they can be dispensed; this sign (!) marks an unusual dose. This wise precaution is taken by a Government within whose dominions none but thoroughly educated and skilled apothecaries are allowed to undertake, either as principal or assistant, the dispensing of physicians' prescriptons. Would it not be well for physicians in this country, where an educated apothecary is the exception, to adopt a similar practice.

THREE BITTER FRAUDS.

"Sweet quinine," "cincho-quinine," and "light quinine."

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Venæsection in Puerperal Convulsions.—Dr. George Capron, in "The Boston Med. and Surg. Journal," in a paper on Bleeding in such convulsions, says:

"In the early part of my practice I almost invariably bled promptly and efficiently, and the results were uniformly favor-

able. For many years, during which I treated a considerable number of cases, I did not lose a woman. During the last twenty or twenty-five years I have seen in my own practice, and that of others, a great number of cases, and among them a considerable number of deaths, and I am well assured that the mortality has been greater among those which were not bled, or not bled efficiently, than among those that were. It is comparatively not a great many years since the essential cause of puerperal convulsions has been known, and it must be admitted that the practice formerly was purely empirical, but unfortunately science has not indicated a practice that is more successful. Science, however, does indicate a course of prophylaxis, and in those cases in which the albuminous condition of the urine and cerebral disturbance lead to the apprehension of convulsions, judicious treatment may prevent them, or very much lessen their severity. I recall several cases in which the prophylactic treatment was highly gratifying. It was formerly supposed that uterine irritation caused by the presence of the child, pressure of the head upon os, obstructed circulation, etc., were some of the causes of convulsions, and hence it was thought that, except to bleed, the most essential thing to be done, was to deliver as soon as possible. It is unnecessary to say that this was a great error, and very liable to be a fatal one. Delivery does not arrest the convulsions, and, indeed, it is well known that the most formidable convulsions often commence hours after delivery. For many years I have refrained from hurrying the labor by forcible delivery, except under circumstances which would require it independently of the convulsions, and also admit of its being done safely. If there be no obstacle to overcome which would require the use of the forceps under other circumstances, the child will ultimately be expelled by the organic force of the uterus, however unconscious the woman may be, and the danger of serious injury to the womb or other parts be thus avoided.

"It is not my intention to discuss the merits of the different modes of treatment which have been suggested, or to raise objections to chloroform, ether, opium, bromide of potassium,

ergot, or any of the numerous remedies which have been essayed, all of which may be more or less useful under some circumstances, but to advocate the practice of early and copious bleeding, as the most prompt and efficient means of lessening the severity of the convulsions, and thereby diminishing the danger of serious lesions of the brain. When the patient is in a condition to admit of the administration of medicines, a free use of the bitartrate of potassa, with or without some more active cathartic, and diuretic doses of colchicum and digitalis, are perhaps among the most valuable adjuvants to the bleeding. When I commenced this letter it was my intention to append a brief report of a few cases that have occurred recently, in which the bleeding was entirely successful, but upon more mature consideration I deem it unnecessary.

The Executive Committee of the Alumni Association of the Medical Department of the University of the city of New York purpose the publication, at the earliest possible date, of a complete catalogue of the graduates from that institution since its foundation. The records of the Faculty having been destroyed by the burning of the college building some years ago, this project is one that should be seconded by every one of the alumni, of whom between two and three thousand are scattered throughout the United States. It is earnestly requested that each of these will, without delay, forward for enrolment his full name and post-office address, with his professional history, including date of graduation, posts of honor, trust held, etc., and also any information which he may possess concerning former class-mates who have since died, or retired from practice. Communications should be addressed to the secretary, Chas. Inslee Pardee, M. D., 72 west Thirty-fifth street, New York.

A New Cement.—When litharge is mixed with glycerine, a paste is formed which possesses the property of setting in a few minutes into a cement of extraordinary hardness. The cement thus formed resists the action, not only of boiling water, but of acids, alkalies, and, in fact, all the ordinary solvents. It is well

suited for use as an impervious luting in joining chemical apparatus; it will adhere to glass, porcelain, or metals, will harden even under water, and will withstand a temperature of over 500° F. It is adapted, therefore, to a wide range of applicatoins, which will suggest themselves at once to those interested in such matters.

A French paper asserts that the use of hair-dyes makes lunatics. The "American Chemist" believes that none but lunatics dye their hair.

MEDICAL NEWS.

'Nulla dies sine linea."

Meetings of Medical Societies.—The American Medical Association meets at San Francisco, Cal., May 2, 1871. The Georgia State Medical Society meets at Americus, Ga., April 12, 1871. The North Carolina State Medical Society meets at Raleigh, N. C., May 9, 1871. The Texas State Medical Society meets at Houston, Texas, June 14, 1871. The West Virginia Medical Society meets at Martinsburg, W. Va., June 7, 1871.

The Baltimore Medical Bulletin.—Physicians will learn with regret that this journal has been suspended or consolidated with the "Baltimore Medical Journal," which last work is now published under the following title: "The Baltimore Medical Journal and Bulletin."

The editors, Drs. E. L. Howard and T. L. Latimer, will no doubt manage this enlarged work in the future with the ability they have so far manifested in the development and conduct of the "Baltimore Medical Journal." Their consolidated work

will be well conducted, and it deserves a full and generous support. Dr. Edward Warren retires from the editorial field. He has labored there with ardor and ability, and those whom he has left in this laborious and trying arena part with him with regret; offering him their best wishes in his retirement, and hoping that he may be as fully appreciated in the great field of practice and teaching as he has been in the editorial field that he has so faithfully cultivated.

The Medical Schools of Louisville have completed their sessions, and a large number of students have graduated. The medalists in the Louisville Medical College are as follows: Gold medal (first honor prize), G. F. Smith, Alton, Ind.; thesis medal, A. U. Evarts, Shamburg, Pa.; anatomical medal, C. K. Roe, Decatur, Ill.; medal for highest standing in surgery, Hardeman H. H. White, Yazoo City, Miss.; for highest standing on materia-medica and therapeutics, W. B. Furman, Henderson, Ky.; for highest standing on principles and practice of medicine, James R. Loury, Glenville, Va.

NOTE.—The names of the medalists in other schools will be published if sent to this journal.

Department of Chemistry, Therapeutics, and Pharmacy.—The editor of this journal has for a long time felt that its supporters should have the benefit of all that is new or valuable in the great fields of chemistry, therapeutics, and pharmacy. He is glad to announce that Dr. Thomas E. Jenkins, of this city, will take charge of this department, and when this gentleman undertakes work, it is safe to guarantee its performance. Dr. Jenkins is an accomplished chemist and a practical pharmaceutist; he is a regular graduate in medicine and pharmacy, and has received honorary and complimentary degrees in both American and European schools. There is no doubt, whatever, but that he will conduct this department with skill, judgment, and fidelity.

Dr. Edmund Andrews, Professor of Surgery in the Chicago Medical College, is the author of the very able article on the

comparative dangers of chloroform, ether, and nitrous oxide, which was published in this journal in June, 1870. The article appeared originally in the "Chicago Medical Journal," and it is a source of regret that the facts here given were accidentally omitted.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

Venæsection.—It will be observed that in the present number much space is given to a consideration of this almost obsolete method of clinical ministration. A method, indeed, so nearly obsolete, that the lamented Prof. George T. Elliot, of New York, states, in the last recorded thoughts of his life, that having prescribed venæsection in a case at Bellevue Hospital, he had to perform the operation himself; for in the large house-staff of that monster institution there was not one who had ever seen venæsection practiced; that no one present knew how to execute the simple operation necessary. An operation so nearly obsolete, that Prof. Fordyce Barker mentions, in an admirable paper on "Bloodletting in Obstetrical Practice," that having, in a case of puerperal convulsions, determined to open a vein, he had to send for a lancet, and it was found impossible to obtain one in a large instrument-maker's establishment immediately contiguous; that the messenger was compelled to make a long journey across the city to the office of Dr. Barker to obtain one of these rare and curious weapons! If it is difficult for a physician of this generation to realize the unquestioned existence of such a condition in the practice of the present day, what would a past generation have said in commentary upon such statements. There can be no doubt, if the heroic bleeders of a past period could have anticipated that such disastrous calamities would befall a modern benighted community, they would have been

reconciled to their departure from a world which contained such professional apostates; and with all the classic, (and now almost obsolete), dignity which graced the profession, each would have been willing to depart, and gladly: "like one who wraps the drapery of his couch around him, and lies down to pleasant dreams."

No one who observes the facts and teachings of modern medicine, can fail to see that there is a growing tendency or disposition to reconsider the whole subject of the lancet, and to restore in part to the resources of the physician this one of the most powerful, most abused, most dangerous, and at times most valuable of his weapons. The subject is one for most serious, impartial and analytical study, and it is pleasing to see that it is fully and fairly receiving this; that venæsection will surely, as the result of patient and scientific investigation, be accorded its just and true position in the clinical ministration of the future. A chief part, and most reliable part, of this modern scientific investigation is the subjecting of all the elements of the physiological and pathological problems involved in venæsection and its results to a rigid system of analytical induction. Indeed, all of true and reliable progress in modern medicine, as compared with medicine in the past, is due to the fact, that at present results are by an honest induction traced to demonstrable causes, while in former periods certain agencies or causes were rashly accepted as competent for the accomplishment of noisily claimed results. Medical facts inductively considered (traced to primary causes) tend to make the sick room a haven of rest and safety, while the older and earlier method of anticipating special results as the necessary effects of specified causes made a golgotha of the field of medicine. In former generations certain agencies in practice were assumed to accomplish certain effects; these agencies were used, and if recovery resulted, the treatment was accepted, trusted, and defended. Physical manifestations, including expression, decubitus, pulse, and minute objective phenomena, were watched and recorded with wonderful skill and marvellous dexterity, (indeed modern observation of objective clinical phe-

nomena is infinitely inferior to that recorded in earlier years,) but this whole method of investigation was erroneous and frequently disastrous. Clinical observation is priceless in value if carefully recorded and accepted as the basis for the investigation of causes, but used as it was used during centuries past, to sustain hypotheses and support assumptions, it becomes unreliable and defective. Clinical observation can, at best, be but the test of discovery. It can never be the pioneer or leader in the medical field; it must be the follower and the subordinate; the servant and not the master; the touchstone for the precious metal of discovery, but never the mine from which this springs. The great danger and inefficiency of one of the results of clinical observation is the reasoning by deduction, the error of so many centuries; while the modern inductive method of medical investigation gives of certainty all that can spring from logical reasoning, based upon facts for premises. Illustration here is easy. Deduction has been endless in the history of digitalis, but where is the evidence yet of truth or progress in our knowledge of its properties? Observation claimed it long and dogmatically as a depressant, now observation claims it as a tonic. Induction gave to medicine chloral, and at once defined its properties, its nature, and its effects. Observation, then, when continued through centuries, is manifestly often the parent of error and contradiction. The claims for the curative effects of venæsection rest almost solely on observation, and the time has arrived when these claims are to be scientifically analyzed and investigated.

In a paper like the present (written *cum currente calamo*) the arguments, the evidences, the surrounding conditions, and reliable results in connection with venæsection cannot of course be presented; but it is useful if not instructive to present some of the curious phases and queer facts which stand recorded in this amusing and wonderful history. Thirty years since the medical mind was in a condition of perfect complacency in regard to the merits of venæsection, and was skeptical in regard to all statements which militated in any respect against its omnipotent and

beneficent powers. If a patient was suffering from the congestive stage of inflammation, he was bled to destroy congestion; if he was suffering from the second stage of inflammation (the stage of effusion), he was bled to remove effusion. If he had dropsy from an anæmic condition, he was bled. If he was hyperæmic, he was bled. If a woman suffered from the vertigo of spanæmia during gestation, she was bled. If she had vertigo from hyperæmia, she was bled. In parturition, if she lost too little blood she was bled. If she had convulsions from losing too much blood, she was fully bled. If one suffered from the first form of apoplexy, (congestion), he was bled. If he had the second form, serous apoplexy, he was bled. If he had the third form, vascular rupture, he was bled. If one had incipient tuberculosis, he was bled.* If the tuberculosis progressed, and there was fever, he was bled. For paralysis with sthenic symptoms, the patient was bled. For paralysis with asthenic phenomena, he was bled. Centric epilepsy was treated by bleeding. For eccentric epilepsy, the patient must be bled. If a patient was suffering from rheumatism, any form of fever, or from almost any disorder, he was bled, and if he did not recover, the assumption was not that he had been badly treated, but that he had not been bled sufficiently. Is not this a true picture? Is it not a just chapter from the the history of venæsection?

The progress of a true medical science, however, has stripped this garment of wonderful complacency from the professional mind, and where dogmatism and arrogance once sat enthroned, there are now to be seen humility, skepticism, and uncertainty. What has been the magic agent to work this wonderful transformation?

A little more than twenty years since, Sir Thomas Watson and his admirers (that is, the great majority of English and American physicians) became satisfied that a new phase had occurred in the history of disease; the asthenic phase. This

* The writer's first experience in regard to venæsection was in bleeding his preceptor for supposed incipient phthisis.

asthenic phase Dr. Watson said he plainly saw, and when he said that he saw it, most physicians in England and America of of course said they saw it too. This phase was called the æsthenic wave, and, according to Dr. Watson and his followers, it came in like the great tidal wave in the time of flood, sweeping all before it. Yet it is also history that some were so perversely blind that they did not see this mythical wave. Dr. Alison, and many of his distinguished friends and followers could not find it. They put on their spectacles, and groped doggedly through the alleys and purlieus of the cities, but it was not to be found. They inquired of all they met if any one had seen a curious wave moving about and around them; but no one could give them any cómfort; no one could help them. They were regarded, perhaps, as men are regarded now who are looking for the famous sea-serpent, the accounts of which terrify some and amuse others. This wonderful wave, however, could nowhere be found. But was it to be seen in France? No; many masters in medicine there were bleeding *pleno rivo ad deliquium.* It was not seen in Italy; it was not seen in Spain. It was scarcely seen in Germany. In America it was of course seen, for it is a part of the National American creed not to allow any one to see anything without a full share of the spectacle. When due search had been diligently made for this wonderful asthenic wave, many true men acknowledged that they could not find it. There was in this dire emergency but one recourse; it was to Sir Thomas Watson. He had seen more of this curiosity than any one else, and scientific men at once applied to him to have their nautical vision sharpened. On the pathological sea, this mariner, they said, had discovered the wave, and it was only fair that he should point it out to them. What did this venerable old captain do? He instituted vigorous friction over the right parietal suture with the fingers of his dexter hand, and said that "he could not see it"; it had vanished; like the little ball under the thimble, he had seen it, but now he did not see it. The great wave had gone back to sea; it had ebbed; it had disappeared.

Had this venerable and distinguished gentleman intended to perpetrate a joke, he could not have been more successful; indeed, no one can read this history without thinking of a familiar scene upon the comic stage. A distinguished *savant* appears with a tripod and huge cylinder; the first he arranges carefully, and upon this the latter is carefully adjusted. The telescope is in position. He gazes through it, and exclaims, "How wonderful"; "how strange!" At first none notice him, but one by one the passers stop; they examine also; they see nothing, but from respect for the philosophical astronomer, and to preserve their own credit for astuteness, they refuse to say so. Finally, they succeed of course in seeing all that they wish to see, or they imagine that they see it, and this last is indeed welcome to them; for do not they, the average men of the day, see that which so distinguished an observer has discerned! They are in raptures; they are delighted with each other; they are ready to mob any one who does not see all that they find so rare and so beautiful. But the philosopher smiles; he no longer sees it; he smiles still more, but his admirers do not; they wish to persuade him that he is mistaken; he must see it, because they observe it so distinctly! But he is inexorable, and leaves them wrangling over their newly-found and so newly-lost phenomenon. Many retire, feeling that they could not be deceived; and whatever be the result in the future, they will always assert that they did see what they claimed to have seen. Is not this an allegory? Has not Dr. Watson been looking through his telescope, and has he not vanished, leaving his pupils manifesting mingled emotions of anger, laughter, disappointment, and surprise?

To return, however, with all seriousness, to this subject what does Dr. Watson say in his manly and noble letter of April 19, 1866, written to the author of the Gulstonian lectures (Dr. Markham). "I am obliged to confess that the result of my later reading and inquiries, and of careful reflection on the matter, is that my previous belief has been shaken." "A careful survey of the facts and arguments adduced on both

sides, of late regarding the alleged change of type in disease, compels me to suspect that my previous opinion was a mistake." After describing certain assumed changes in fevers, he says: "We know now" (but few of us knew then) "that the diseases which we had been treating were not varying types of of the true malady, but two different species." He then says of his past opinions: "I should be ashamed, if I had not the candor and the courage to say that I renounce them." He concludes by saying that "in a sentence of mine, which has attained an unhappy prominence in this controversy, I ought to have spoken of successive waves of opinion, rathan waves of time or disease." One finds, however, that though the bearer of the telescope has now gone away, stating that he does not see anything, that his followers remain still upon the stage; they all see the adynamic wave still. The sea-serpent is charming and deluding them! Is this not all wonderful? Is not this "truth stranger than fiction?" What is to be said in reply to the statement still made by those who yet declaim about this adynamic wave which they, standing on the shore of the pathological sea, still see careering about in a most partial and inexcusable manner, sweeping over certain portions of the civilized globe, while other portions equally entitled to respect are contemptuously repudiated? These earnest and sincere gentlemen say that they will testify "upon the Holy Evangelists" that they have seen it, and see it yet; this "monster of such hideous mien, that to be hated needs but to be seen." What is to be said to them? Dr. Watson acknowledges his error. Are they better judges than Dr. Watson and the host of wise men of the East and West? Dr. Watson has deserted them, but they are not to be thus driven about by every change of doctrine. They still hug this delusive phantom, and persist in adopting the discarded offspring of the great.

Present views in regard to the existence of this adynamic wave rest almost solely upon observation. Gentlemen have looked through the telescope, and they are obdurate, unyielding. But is not this the old story in medicine? Is it not an illustra-

tion of the danger of relying upon observation, as was universal of old, and not accepting the results of an inductive reasoning upon facts? How many have been deluded by observation? How many are daily being shipwrecked on this wreck-strewn shore? Did not Pare believe that the use of boiling oil was the true method of healing gunshot wounds; had he not observed it produce such results, and did not accident—viz., the failure of his supply of boiling oil, with the results of this failure teach him that his observation was worthless? Did not Clutterbuck and Bateman, and Gergory, and Cullen, believe that the lancet was the true method of treating fevers, and almost all diseases, (so much so that at the hospital in those days, it is said, "the floor was running with blood, it was difficult to cross the prescribing hall for fear of slipping; patients were seen wallowing in their blood like leeches after a salt emetic)", and yet what was their observation worth? Do not the worshippers of the Silesian peasant say that the practice of Priessnitz only is reliable, for they have seen the results? Do not homœopathy and Thomsonianism derive their followers and plausible records from observation? When Perkins extracted all manner of diseases with his tractors, did not the best physicians, with clergymen, old maids, and titled aristocracy, found the Perkinean Institute, and cry with a loud acclaim, there is but one divinity in therapeutics, and Perkins is his prophet? When laughed at, and reasoned with, did they not angrily exclaim, "It is a true doctrine, because we have seen its results;" and were they not covered with shame and confusion when a diabolical upstart showed that he too was healing diseases with Perkins' tractors, but that his were made of wood, and only painted to resemble the great original? Was it not long before these observers could be made to abandon their telescope through which they had been seeing such wonderful and glorious phenomena? Did not their mortification and errors all spring from the protean womb of observation? If Dr. Watson, and those of a similarly acknowledged power, admit that they were wrong in regard to this adynamic-wave idea, is it too much for gentlemen who may be the equals of Dr. Watson, but cer-

tainly not his superiors, to acknowledge that it is barely possible they may be wrong also?

Dr. Watson had something of an excuse, if not a reason, for his views; he said that the cholera once came by that way, and it impressed all so seriously that their hearts had not recovered from the shock, and when the people became sick, and were visited by their physicians, that these astute gentlemen detected a want of heart-action; that the adynamic-wave was on the premises waiting for them! This explanation or excuse is bad enough, but many of his English and American admirers see this same heart weakness even where the cholera is known but in storyand in song. Cholera is terrible, indeed, but it taxes the credulity of reasonable men to believe that the tread of this great Iconoclast can be felt, as Dr. Watson claims, years after it has disappeared; how much more impossible that it can be seen hundreds of miles from the lines of its periodical visitations.

Apart, however, from all of the valuable testimony that has been historically given against this bugbear, this adynamic wave, is it reasonable to suppose, that where the average duration of life is being consecutively increased; where the life-expectation is yearly improving; where hygiene, with all of her wonderful and beneficent laws, is being surely installed in the great centres of the world; where variola is becoming yearly a more inefficient disturber of communities; where scrofula is disappearing; where syphilis is better controlled; where tuberculosis is being robbed of a large part of its fatality; where great epidemics are becoming less frequent; where, indeed, all causes which extend life and strengthen vitality are working such wonderful results, can it be believed that man is becoming weakened in vitality, adynamic, and that he succumbs now where formerly he battled bravely and successfully with the destroyer? When man enjoys all that gives increased strength—viz., improved diet, sound hygiene, increasing freedom from cachexias, and debilitating epidemics, where the average duration of generations is becoming greater, etc., is it rational to believe that man

is becoming weaker and devitalized? Is it possible to believe this?

This adynamic-wave theory is a myth, a delusion, and a snare. To believe that a dynamic condition in disease prevailed, when man's surroundings, his uncontrolled cachexias, his desolating epidemics, his ignorance of hygienic laws were conspicuously manifest, and tended to devitalize him, is to repudiate all logical relations of effects to causes; but it is even more illogical to suppose that man could have become adynamic when, as at the present time, he is in the full enjoyment of all those agencies which bring to him increased longevity; the blessings of hygiene, the comparative freedom from epidemics, the diminution of scrofula, the control of syphilis, the mitigation of tubercular trouble, and a safety from variolous desolations.

Summon the great physicians of all nations to the witness-stand, and they will testify that very many diseases give better results when the lancet is avoided; not because man has become adynamic, but because his medical adviser has become dynamic, more skilled in pathology, more skilled in diagnosis, more skilled in treatment. They will also testify, however, that the reaction in regard to venæsection has been extreme; that the lancet is a powerful and safe agent where it is now often avoided and proscribed.

Medical investigation has, however, been again aroused; it will be pursued with all the agencies and implements of the improved and enlightened science of the present day. A great revolution is even now in progress, and as the result, the lancet will surely be accorded its true power and just position among the best therapeutical agencies in the clinical armory.

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—ON SOME OF THE THERAPEUTICAL EFFECTS OF THERMAL BATHS OF HIGH TEMPERATURE. By J. L. CABELL, M. D., University of Virginia.

In an interesting and instructive paper, "On the Internal and External use of Mineral Waters," by Dr. A. Kessler, published in the "New York Medical Journal" (July and August, 1870), the singular statement is made that baths of temperature above 100° Fahr. "often injure the treatment of rheumatic and arthritic affections by checking the discharges from the kidneys and alimentary canal." Such baths, in the opinion of Dr. Kessler, should but rarely, and with great precautions, be administered for medicinal purposes, and should last only a few minutes.

It is freely conceded that so potent an agent should be used with great precautions, and for a limited number of minutes at a time, and further, that it should be absolutely prohibited to certain classes of invalids to be presently specified; but I have experienced no little surprise that the writer of the excellent paper in question should have selected "rheumatic and arthritic affections," as exemplifying the contra-indications of the hot

bath. At the Hot Springs, in Bath county, Virginia, natural thermal baths of every grade of temperature, from 80° to 106° Fahr., are offered to the choice of the various classes of invalids who congregate at that place every summer. The experience of more than half a century has served to induce a very large proportion of the subjects of the affections in question to select the very hottest bath, known as the "boiler bath." Relief or cure is the rule, complete failure, though occasionally observed, being comparatively rare. I have never known or heard of any case in which actual injury was sustained by a subject of these diseases, unless complications existed which as themselves contra-indicating the employment of the hot bath furnished a satisfactory explanation of the mischief. Such cases will rarely or never be observed where invalids take the hot bath only under medical advice.

My own views, as deduced from the well-known physiological effects of very hot baths, when not followed by immediate refrigeration by a cold plunge or shower bath, as in connection with the Russian vapor baths, were nearly the same as those expressed by Dr. Kessler, until my attention was accidentally directed many years ago to the wonderful results realized at the Hot Springs of Virginia, where rheumatic and arthritic cases are treated annually with the best results, some, indeed, by the hot spout chiefly, some by the alternate use of spout and immersion baths of 106° Fahr., and not a few by the latter exclusively. In addition to this class of affections, a few others are found to be benefited by the hot immersion bath, such as chronic congestion of the liver, and functional derangements consequent on congestion of the portal system, engorgement of the spleen of malarial origin, and some cases of chronic paralysis.

The statement that the "boiler bath" (106° Fahr.) could injure the treatment of rheumatic affections, or do harm to any except a few special classes of cases, would, doubtless, excite a smile of incredulity at the Hot Springs, where the residents and *habitues* have seen so many invalids take this bath daily for four or five weeks, or longer, not only without injury, but with

marked and wonderful benefit. Moreover, this same bath is often taken by persons for whom a bath of a different kind has been prescribed, when it happens that a large current demand for the latter makes it difficult to get the prescribed bath at the hour most convenient to themselves. I have, myself, taken it repeatedly without experiencing the feeling of exhaustion which commonly supervenes after an artifical hot bath, and I recall the case of a lady of nervo-sanguineous temperament whom I regarded as a particularly unfit subject for the *hot* bath, and for whom I prescribed the tepid bath as a sedative, in conformity with the views on this subject so strongly and earnestly advocated by Tilt in his hand-book of uterine therapeutics. This lady complied with my prescription on one or two occasions, and then, without mentioning her intention to me, resorted somewhat clandestinely to her favorite "boiler," applying with reference to it the license I had given her in respect to the tepid bath, namely, that of *remaining an hour or two in the bath!* She laughed at my expression of alarm when the facts were at length made known to me, and averred that her improvement, which I had recognized and ascribed to the effect of my prescription, was really owing to the boiler bath, which she had taken much more frequently than the other.

I do not believe that ordinary hot water will produce such results. If it be asked why the thermal waters differ so remarkably from other heated water, I frankly admit that I cannot give a satisfactory answer.

It cannot be owing to the dissolved mineral matter, for similar or even identical effects are observed at the most highly mineralized thermal springs, and at those which contain no more mineral matter than is found in ordinary drinking water. It is pure speculation without a shadow of positive proof to affirm, with Dr. Granville, that "telluric heat" has a peculiar "caloricity," or with Lersch, a practitioner at Aix-la-Chapelle, that thermal waters may be more highly charged with electricity, or with the late Dr. James Johnson, of London, to refer the effects to "the greater degree of solution and intimate union which the

mineral principles in thermal springs possess when flowing out of the soil, where they have been kept in this combination for years." But whether a satisfactory solution of the mystery be ever discovered or not, the fact is, that this difference between thermal and ordinary heated water is seldom or never questioned by competent judges who have examined the question without bias or prejudice. On this point Dr. Kessler gives emphatic testimony in favor of the view advocated. Thus, in the section of his paper which treats of the "Indifferent Thermal Waters," he says: "These waters resemble in the character and amount of their contents the *aqua communis*, or rather *pluvialis*, and differ from it only in temperature. Their physical properties are just as negative; they are perfectly limpid, tasteless, and inodorous. What is it, then, that produces the *wonderful influence they are known to exercise upon the organism?* Is it their mineral constitution, or their impregnation with gases? By no means. The solid ingredients exceed scarcely, if ever, a few grains in the pound, and the gaseous contents are equally scanty, nitrogen alone being found in comparatively larger quantity. Their effect can only be ascribed to high temperature; *and here, again, the alleged superiority of natural heat over artificial becomes a verity.*"

He goes on to say that "the indifferent thermals, by promoting secretions and excretions, improve assimilation, they calm the vascular and nervous systems, soften and relax the tissues, and vitalize the organism. Operating as diaphoretics, diuretics, resolvents, sedatives, and tonics, experience has proved them to be highly efficacious in morbid irritability (erethism) of the nervous system, in neuralgias and hypercineses, in chronic rheumatism, and atonic gout, especially of delicate, exhusted, and nervous individuals, in palsies dependent on contractions, tumors, and nodositics, in diseases of the skin, bones, and joints, and in convalescence. They are unsuitable in strongly marked diatheses, for the removal or improvement of which the more heroic alkaline and saline thermals, acting powerfully upon the kidneys and bowels, are required, and they are contra-indicated

in hæmoptysis, in conditions pre-disposing to apoplexy, and in febrile diseases."

That the stimulating effect on the excretory function of the skin by a very elevated temperature does not necessarily check the action of the kidneys, is admitted by Dr. Kessler in a subsequent part of his interesting paper, where he speaks of the mineral mud-baths which have recently come into use, and form a leading feature in some of the European watering-places. "They are applied either to the whole body or in the form of fomentations to single parts—the liver, spleen, joints, etc., and can be used at a much higher temperature than the common water baths, mud being a bad conductor of heat. The physiological and therapeutical effects of mud-baths are very marked and powerful; they act principally by their volatile acids, their solid contents, and high temperature, as unrivalled excitants, stimulating the skin, animating and vitalizing the nervous system, augmenting secretions and excretions, promoting absorption, and improving the tone of the organism. The pulse is accelerated, the bodily heat rises, *diuresis is increased*, profuse, protracted, peculiarly sour perspirations ensue, and under these effects, by which even the most torpid system is made to react against disease, an alteration in the character of the fluids takes place, and a speedy removal from the organism of the effete constituents of the blood and juices, and with them of many morlific elements. * * * * * * * They are indicated in torpid scrofulosis, anæmia, and chlorosis, in old rheumatic and gouty affections, with morbid residues in the muscles, bones, and joints, contractions, tumors, lumbago, sciatica, peripheric palsies, in chronic hyperæmia and hypertrophy of the liver and spleen, in affections of the male and female sexual organs, impotence, spermatorrhœa, sterility, leucorrhœa, and some diseases of the skin, impetigo, chronic urticaria, atonic ulcers, old injuries, anchyloses," etc.

Resuming the consideration of the effects of natural water-baths of high temperature, we may say that our experience at the Virginia Hot Springs corresponds with that of the numerous competent observers in Europe, some of whom are cited by Dr.

J. Bell, of Philadelphia, in his Treatise on Baths (second edition, 1859), who, after insisting upon the importance of the distinction between warm and hot baths, treats separately of the physiological and therapeutical effects of each. Having specified, with illustrations, the several diseases which are likely to be benefited by the hot bath, he proceeds, by way of recapitulation, to refer "to the clinical records of the celebrated Wisbaden and Leplitz Baths." "Some writers," he says, "are disposed to attribute additional virtues to these latter, on the score of their mineral, and chiefly saline impregnation; but these are too inconsiderable to merit a notice or to create any material difference between the waters at the places mentioned, or at Leuk and Bath, and a simple thermal water."

He then refers to the testimony borne by Mr. Lee in his work "On the Principal Baths of Germany" as to the efficacy of the *hot* baths at Wisbaden, as follows: "In chronic gout and rheumatism of the atonic kind, and in neuralgia, the greatest relief, and often the entire removal of the disease, are procured by the Wisbaden baths. The state of abdominal plethora, with congestion of the liver and obstruction in the circulation of the *vena portæ*, with its consequences, as impaired digestion, deficient or vitiated biliary secretion, piles, etc., occurring for the most part in persons about or beyond the middle period of their life, who have been addicted to the pleasures of the table, and marked by more or less protuberance of the abdomen, with diminished muscular and nervous energy, is one well calculated to be relieved by the use of the Wisbaden waters internally and externally employed." The same eulogy may be passed on hot baths in hypochondriasis in males, and of irregular menstrution in females, especially if connected with a congested state of the abdominal or pelvic viscera. Paralysis, unaccompained by cerebral congestion or plethora, often yields to the operation of the Wisbaden baths. Mr. Lee adds that, in some instances during the *cure* by hot bathing at Wisbaden, "there will be constipation, loaded tongue, loss of appetite, oppresion about the chest, feebleness of the limbs, nervous irritability, disturbed sleep, perspiration, palpitations,

and eruptions on the skin; which effects, if continued or occurring in sanguine or irritable subjects, required a suspension of the bath for two or three days, or, if need be, a temporary recourse to tepid bathing. Precisely similar effects are occasionally observed at all thermal bathing places, and the condition is designated in Germany the "*Bad-sturm* or Spa Fever," and elsewhere termed the "Reaction Fever." According to Dr. Heim, of Wildbad, as quoted by Dr. Johnson in his "Pilgrimages to the Spas," this reaction is precisely that which ought to inspire the greatest hopes in the patient, as it announces a change in his constitution, and a victory over his malady. The disagreeable sensations, however, which he feels, often put him out of humor with the baths, especially if old pains and discomforts that had ceased now reappear, which they often do. He becomes impotent and morose when he is re-visited by rheumatic pains, neuralgia, gout, hæmorrhoids, etc., which he had thought to be extinct. Such reaction, however, is indispensable towards the victory of nature and the baths over the disease, for which they were employed.

Dr. Bell states that analogous effects are familiar to the gouty subjects who visit Bath, in England, and bathe in and drink the water, and on whom, in consequence, a fit of acute gout supervenes. The nearer the warm approaches to the hot bath, the more likely is the fever of reaction to occur.

It is proper to add, that aside from these changes of temporary duration which, as it appears, are to be regarded in the light of critical phenomena, more serious effects are sometimes observed, and that these constitute grounds of positive contra-indication of the continued use of the hot bath. Dr. Bell cites the following instances: "Fourcroy relates the case of an individual, who, being immersed in a bath of the immoderate heat of 180° Fahr., fell down apoplectic an hour afterwards. Buchan narrates the history of a patient who was seized with paralysis from having used a bath "excessively hot." Venel saw a sick person sink into a state of fatal debility by remaining too long in a hot bath, and the same author tells

of a Spaniard who died of hæmorrhage from the same cause. Rostan (*Dictionnaire de Medicine, Paris*, 1833, *Art. Bains.*) relates a most extraordinary case of a young woman who, suffering from severe pains in her limbs, was advised by a quack to remain for twelve hours in a bath, of which the temperature should be progressively raised to a degree approximating the boiling point. After six hours she lost consciousness. An hour later she was found with her head resting on a plank, which stretched across the bathing-tub, entirely insensible. She was taken out of the water—her face was black and enormously swollen—the surface of the body of a deep red, very hot and congested, the pulse hard, frequent, and irregular, the respiration labored and burning, and there were convulsive movements of the limbs which were excited by the slightest touch. Venæsection to the extent of withdrawing twenty-eight ounces of very red blood arrested the convulsions and restored consciousness and the power of speech. After diverse accidents, especially a very severe epigastric pain, which was treated by leeching and emollient applications, this woman recovered. Six weeks afterwards the entire cutaneous epidermis was detached. The pains in the limbs had not recurred eleven months after this severe treatment.

These are, however, instances of an insane abuse of an agent which, as we have seen, may be made the means of relieving or curing many distressing maladies. But it would be well to prohibit its employment in the case of persons liable to either cerebral or pulmonary congestions, or afflicted with cardiac trouble, and in any case to recommend it to be used with great precautions under the supervision of a medical adviser.

ART. II.—LACERATION OF THE RECTUM. Reported by M. T. TAYLOR, M. D., Fishersville, Jefferson, Ky.

On Thursday, at 3 o'clock P. M., September 2, 1869, J. C., in attempting to descend from a stack of grain, which was being

threshed at the time, slipped down upon the large or blunt end of a pitch-fork, it entering the body about one-half an inch behind the *anus*, and passing upward to perhaps an inch from the point of entrance, where it struck the posterior portion of the *rectum*, lacerating the bowel up to a point near the *sigmoid flexure*.

The depth to which the fork penetrated, as evidenced by the blood and shreds of areolar tissue on the handle, measured nearly eight inches. The implement was a common steel fork, used by farmers, the prongs resting on the ground, and the handle leaning against the stack in nearly a perpendicular position. The end of the handle, which entered the body, was round, and measured one and one-half inches in diameter at the largest part. The man weighed 160 pounds, and the momentum gained by such a weight in slipping nearly perpendicularly from a height of, perhaps, 20 or 25 feet, was sufficient to drive the steel prongs into the ground to their full extent, where the fork remained fastened, throwing the body forward to a considerable distance, the elastic steel causing the fork to spring back when the weight was thrown off.

The man was placed on a sled and carried to his home (a distance of three-quarters of a mile) immediately. I saw him one hour after the accident, when I found him pale, but not greatly prostrated, and somewhat cold. He did not complain of much pain, except when moved. There had been no rigors; the pulse 95, rather soft and intermitting. There had been much hæmorrhage, which still continued, though in lessening quantity.

The fork had entered the body, as already stated, a little behind and to the right of the anus, the sphincter ani just escaping. On removing a few shreds of areolar tissue, which were hanging from the wound, I introduced a silver probe into it, and passing my finger into the rectum, found that it came in contact with the probe about one and one-half inches from the *anus*. I explored the wound, following the general course that the implement would naturally make, pressing the probe to the posterior surface of the wound, so as to prevent its passing up the

rectum. It passed readily to the depth of nearly eight inches, corresponding to the mark on the handle of the fork. The rectum, from the point where the implement came in contact with it, was lacerated as far as I could explore it with the finger, as I found by introducing the index finger of each hand, the one into the wound and the other into the rectum as far as it was possible to do so; I concluded, therefore, that the bowel was ruptured to a point near the sigmoid flexure, or as far as the course of the gut corresponded to the general direction of the wound.

There was no loss of sensation in the lower extremities; passive motion gave considerable pain, but there was but a little while the patient was perfectly at rest.

Whiskey and water were administered in small quantities till the pulse became stronger. At 7 o'clock it was 100 and less intermittent, the hæmorrhage very slight, and the temperature natural. The wound was cleansed by introducing a flexible tube into the rectum and injecting tepid water with some little force, which had the effect of washing out portions of clothing, hair, and coagulated blood. Water-dressing was applied to the external wound, with directions to keep it constantly saturated with cold water, and a full dose of morph. sulph. administered, to be repeated every two hours until sleep or rest was procured. Acidulated drinks; beef-tea for nutriment.

Second day—September 3—8 *o'clock A. M.*—Pulse 110, rather soft; no excess of heat; but little thirst; hæmorrhage almost entirely ceased; slept two or three hours during the night; countenance somewhat pinched, but seems perfectly self-possessed; complains of deep-seated pain in the posterior pelvic region; expresses himself as being very sore, as if he "had been beaten all over with a stick." Prescribed epsom salts to empty the bowels; continue whiskey and cold water applications to external wound.

Same day—2 *o'clock P. M.*—Arrive just as the salts are acting. The attendants had gotten him out of bed, and he was resting on his hands and feet, he being unable to get in any posi-

tion except on "all-fours." At every peristaltic movement of the bowels the fluid fæcal matter would pass mostly through the wound; "squirting it," as the attendant expressed it, "in all directions." Complains of great soreness in the pelvic region; pulse considerably accelerated; hot, dry skin; much thirst, and general febrile symptoms. Wound cleansed with tepid water. Use, by means of flexible tube and syringe a tepid solution (℥i. to Oij) of chloride of soda. Prescribed laudanum and carb. ammonia, to be repeated every two or three hours until pain is lessened or sleep procured. Sponge the body with acidulated water; continue beef-tea and whiskey.

Third day—September 4—8 *o'clock A. M.*—Find patient in much better condition; slept pretty well; pulse 110, softer; skin not so hot; thirst much less; took as much beef-tea as he ought, and relished it; found slight discharge from wound, but could tell but little about it from the fæcal matter that was mixed with it; several small actions through the night, he having no power to control the discharges, the fæcal accumulations passing through the wound. The septum between the external wound and anus presents the appearance of sloughing. Repeat the chloride of soda injection after thoroughly cleansing the wound. Also, apply a solution of carbolic acid to external wound. Substitute morph. sulph. for the laudanum, and continue ammo. carb.

Fourth day—September 5th.—Patient in much the same condition as yesterday. Discharge from wound increased; not so much fæcal matter, but still enough to shroud the character of the pus. Continue treatment.

Fifth day—September 6—8 *o'clock A. M.*—Found patient much improved every way. Had slept well; pulse 90, soft and full; skin moist; no thirst; appetite good. On examining the wound found the septum sloughed through, thus making the wound and the anus one and the same opening. A considerable slough had been thrown off, making the external wound assume a triangular appearance. No fæcal matter, and the dis-

charge a perfectly healthy pus. Complains of no soreness except when moved.

Tonic doses of quinia sul. and ammonia carb. three times a day, and morph. sul. at night.

Sixth day—September 7.—Patient still improving; rested well; appetite good; expressed himself as getting well.

From this time up to the twentieth day the patient continued to improve uninterruptedly, at which time he was able to walk around, and by using a pillow could sit on a chair. It is now more than a year since he was discharged, and he experiences no inconvenience from the wound, except that he has but little power in controlling his rectum when it is filled with liquid fæcal matter. Flatus passes from his bowels without his having any control of it whatever.

This case is remarkable as terminating in complete recovery where the wound was so extensive, the rectum being lacerated nearly its entire length. How did recovery take place? Did the lacerated edges of the gut come together, or did the two lacerated edges become adherent to the posterior wall of the pelvis?

ART. III.—CASE OF POISONING BY STRYCHNIA CAUSED BY LOSS OF FUNCTION IN GUSTATORY (LINGUAL) NERVE, THE RESULT OF PARALYSIS.

By V. E. KERSH, M. D., Relfs Bluff, Ark.

Thomas E., native of Alabama, aged sixty-four, by occupation a farmer, applied for medical attention about the 1st of October, 1870, suffering with malarial fever and left hemiplegia. Patient states that eighteen months ago, whilst at work, from overexertion, he fell a victim of sun-stroke, or something of the kind, and since then has been troubled with paralysis. So soon as all febrile excitement subsided the following tonic pill was prescribed:

℞—Quinine sulph., ℈iii.
Ferri reduct., ℈ivss.
Pulv. rhei., gr. xv.
Strychniæ sulph., gr. i.
Make into pills No. 40.

S., one pill thrice daily. Under this treatment the patient greatly improved; was able to do a little work about the farm. However, on November 7th I was called in haste to visit him. Arrived at 8 P. M.; was informed that my "strychnine" pills were killing him, and his condition was such as would readily excite alarm; excruciating pain in the præcordial region, great rigidity of muscles, alternating with subsultus; difficult respiration, constriction about the chest, tetanic twitchings of the muscles of the face, neck, and arms; profuse perspiration, cold skin; pulse imperceptible. His suffering was almost indescribable, spasms occurring in immediate succession and lasting from five to twenty minutes. On inquiry, and finding that he had not eaten anything unusual, I did not consider it necessary to give an emetic; so ordered the following

℞: Tinct. opii., gtts., 60.,
Aq. camph., fl. ℥ss.,

To be given at once, and same prescription repeated every half-hour until some abatement of symptoms was observed.

November 8—3 *o'clock A. M.*—Is quiet; has rested well for the last hour. Give

℞—Ol. ricini, ℥ss.

Acted during the day. Patient is much better.

November 10*th.*—Placed him on a supportive plan of treatment, which seemed to exert a beneficial effect until December 10th, when he had another attack of convulsions.

℞—Potassii bromid, ℈iii.
Aq. puræ. f. ℥vi.

S., tablespoonful three times daily; and other treatment continued as before.

January 9, 1871.—Patient called on me this morning to tell me how he was poisoned; says, on the day of the accident (November 7th), he was poisoning rats and moles about his garden, and thoughtlessly put a vial of strychnia in his coat-pocket with his tobacco; the bottle, by some means, became uncorked, and the contents were emptied; some on the tobacco. He took a chew of this tobacco, but being deficient in taste and sight since his paralysis, did not detect anything peculiar. Two days since he made the discovery. On putting on the same coat which he wore November 7th, and taking from his pocket some peanuts, he was just about to eat them, when he was asked by a little girl if they were not poisoned; did he not poison rats with them? He, for the first time, thought of having used strychnine on November 7th, and his thoughts flew back to that day; he remembered having put the strychnine in his pocket, and on examination he found the peanuts, tobacco, etc., covered with the poison; and now is quite sure that the use of the tobacco was the sole cause of the accident.

ART. IV.—SEVERANCE OF THE TRACHEA AND ÆSOPHAGUS WITHOUT INJURY TO THE CAROTIDS OR JUGULARS. By I. R. GODWIN, M. D., Fincastle, Va.

The history of the following case may be of interest:

Mr. B. B., aged about thirty-five years, married, by occupation a tinner, of good character and temperate habits, attempted suicide on the 15th of September last by cutting his throat. The instrument used was the small blade of a pocket-knife, not more than two inches long. On the day above mentioned I was summoned to attend, in great haste, this unfortunate man, and found him lying on the floor of a room in the hotel, attended by two physicians from the country who happened to be in town. To the surprise of every one, B. was intoxicated,

and in this condition, with his throat literally "cut from ear to ear," was wallowing in his blood, clutching at those around him, and unable to articulate; was uttering the most horrid sounds imaginable. Imagination may give some idea of such an injury, but to realize it in all its ghastliness one must see it, approach it, bend over it, touch it. On examination we found the larynx *entirely* severed, the wound, externally, reaching from the internal border of the sterno-mastoid muscle of one side to a like point on the opposite side, and including in depth the pharynx to its posterior wall. In other words, the cut was through the thyro-hyoidean membrane at the lower border of the os hyoides, exposing to full view the glottis and posterior part of the pharynx, both of which I could touch with my finger; in fact, I could have thrust my whole hand into the wound. It was impossible to estimate the quantity of blood lost, as it was spread over a considerable surface, and his clothing was saturated with it; but enough to cause repeated swooning, and the frequent exclamation, "He is dying," or, "he is dead!" So alarming was this swooning, that at one time we were almost sure he was dead, but on directing a servant to turn his face upward, reaction followed, and we determined to go through with, at least, the form of a dressing. Accordingly we brought together the edges of the wound with several sutures; placed on it a compress and bandage, and having fixed him as comfortably as circumstances would permit, left him in the hands of his friend to die. To my astonishment, on the next morning, I found B. alive, and, of course, very anxious to get well. He was very thirsty from loss of blood, and also, as a consequence, from his previous debauch, but could not swallow, as the pharynx was divided; the water, when he attempted to swallow, passing through the wound to the outside. He was entirely rational, had a good pulse, and his condition in every way so much more favorable, that I determined to give nature a fair chance. I opened the wound, removing all the stitches of the previous evening, and displaying it in all its gasping hideousness. Assisted by Dr. W., from the county, I first, *with great*

difficulty, adjusted the parts and secured them in place by wire stitches, including only the tissues covering the os hyoides and larynx. One end of each suture was left depending through the external wound. The second closing of the latter was easily accomplished. The chin was then fixed to the chest by bandages under the arms and over the head. The communication between the larynx and tongue being now re-established by the closing of the wound, the patient conversed *viva voce*. So much more comfortable did the patient feel, that he was cheerful, and evinced some faint hope of recovery. He could now take water and some nourishment through a tube provided for the purpose, but swallowed with great difficulty, much of the water and soup passing through the wound. Enemeta were used to keep the bowels open, but no medicine given by the mouth. At the end of the third day I removed the dressings, and greatly to my disappointment several of the sutures also. Otherwise the wound looked well, and up to this time the patient declared that he had not suffered a particle of pain. There was little to encourage, when, at each renewal of the dressing, one or two of these sutures would be found lying on the bandage. This continued to be the case until every one had come away, both internal and external, and I had the mortification of seeing my best-conceived plans fail, and the little epiglottis staring at me through the fearful gap, as if to bid defiance to my forlorn hope. Granulation had now set up, and sutures were out of the question, and by no device of my own or any I could get from the books, could I succeed in keeping the parts *in situ* by bandages. The main thing to be overcome was the effort of swallowing; the rising and falling of the larynx, separating the wound at each motion. As this could not be done, I cast bandages aside, and partially effected my object by means of adhesive strips extending from the middle of the upper border of the clavicle of one side to the ramus of the inferior maxilla of the opposite side. Immediately over the wound I placed a pledget of lint saturated with a solution of carbolic acid, upon this a compress, and secured all by a band-

age around the neck. The renewal of this dressing from day to day was all the treatment the wound received. I discharged the patient about the middle of November, the wound being entirely closed.

The mode of healing in this case was entirely by granulation, and exhibited that wonderful power of nature in filling up, where the surgeon fails to bring together, and of absorbing and smoothing down to a small cicatrix the superabundant granulations.

It may be suggested by some that fatal hæmorrhage would necessarily follow such a wound. In answer, I quote from Gross on "Injuries and Diseases of the Neck." "It has been doubted whether the windpipe and œsophagus could be completely severed without injury of the carotid artery and jugular vein; but the possibility of the occurrence has been tested by several well-authenticated cases." There was no vessel cut in this case that needed ligation. I add this case to our present records on this subject.

NOTE.—All of the departments in this number are curtailed to make room for the Transactions of State Societies.—ED.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—THROMBUS OF THE VULVA. A Clinical Lecture, Delivered at Bellevue Hospital by FORDYCE BARKER, M. D., Professor of Clinical Midwifery and Diseases of Women, Bellevue Hospital Medical College, N. Y.

Gentlemen,—A long time ago, at the very commencement of my practice, I was called to attend a young woman in labor. Everything seemed to be progressing favorably, when suddenly

the patient screamed, threw herself to the other side of the bed, and appeared to lose all self-control. A few minutes before this I had made an examination, and found the cervix dilated, and the head descended into the pelvic cavity. I was promising myself a speedy termination of the labor, till startled by the interruption of it just described.

The patient was suffering such intense pain, and the parts were so tender, that it was some little time before I could get another examination. Then I, at first, discovered a tumor of a hardness resembling that of the fœtal head; and I thought the fœtus was just escaping from the vulva, and that it was the agony attending this which had brought the patient to her distressing condition. But I soon found that she was losing a good deal of blood, and that the uterine contractions had ceased. Her excitement and anxiety I was able to calm by perfect self-possession; but I was unable to make a satisfactory diagnosis. The indication was evidently to prevent loss of blood, though as to what the hæmorrhage meant, I had not the least idea. To fulfil this indication, I applied a saturated solution of alum, and made a pretty strong pressure upon the tumor, which I kept up for an hour or two, the labor-pains all the while being stopped.

The case being so obscure, I decided to call a consultation. A physician much older than myself was sent for, who made a comparatively hasty examination, and at once pronounced the case one of placenta prævia; saying that he had often had such cases; that owing to the severe pain produced by my application of alum and compression, I had arrested the labor, and it might be some hours before the pains returned, when he would be sent for again. On the whole, he damned me with faint praise; thought I had done very well, considering that I was a young man, just beginning practice; and, as I afterwards learned, censured me to the family for the ridiculous folly I had been guilty of in making my applications. He left, with directions to be called when the labor commenced. I was hurt and humiliated, but not convinced. I found, too, that the consult-

ing physician had not favorably impressed the family, while I had rather won their confidence and sympathy.

In the meantime, my measures had stopped the hæmorrhage. About an hour later it returned to a considerable amount; and as the patient's chief danger seemed to be from loss of blood, I saw nothing better than to renew them. They could certainly do no harm. In applying the compresses, I embraced the opportunity to make examinations, and presently came to the conclusion that there must have been some solution of continuity in one of the labia to account for the bleeding. The nurse was a sensible woman; and directing her to keep on the alum and compresses, I went home to consult my books. Though my library was tolerably rich in works on obstetrics, I could find nothing, as I hastily turned them over, except a short description of extravasation into the labium, with no directions for treatment. I reflected that it would not do for me, a young, unmarried man, with a reputation to make or to mar, to let the woman die with a child in her. So I turned over my books again for directions as to the use of the forceps, took my forceps, and went back to the house.

During my short absence the tumor had so increased in size that it was with difficulty that I could pass my fingers into the vulva, especially since it caused the patient so much suffering; for this was long before the days of anæsthetics. The head was pretty low down, but the woman had lost still more blood. I said to myself: With this bleeding and this tumor there is no chance of the labor terminating spontaneously; or, if there be such a possibility, and I wait for it, there must, at least, be a great loss of blood; the patient will probably die, and that will be ruin to me. I applied the forceps, and delivered a living child. This was my first forceps case. Immediately following delivery there was a tremendous gush of blood, and almost as soon as the blood escaped the tumor filled up again. With no authorities and no experience to guide me, I could only follow a sort of instinct, with the conviction that it was leading me right, or, perhaps, a non-formulated logic which it would have been

difficult for me to defend. I am sure, gentlemen, that no general in time of battle, considering that he held the fate of an army or a nation in his hands, ever felt a heavier weight of responsibility than I did here; and although this was twenty-eight years ago, every incident and detail of the case is stamped indelibly on my memory, as vividly as if it had occurred but yesterday. From further examination I satisfied myself that laceration of the labium had taken place, and that the extravasation of blood was into this. I recollected that Hunter, in his work *"On the Blood"* (which I had studied carefully in my earliy pupilage, and which still remains a great favorite with me), had described the case of a woman who had accidentlly fallen upon the handle of a water-pail, causing laceration of the labium with great hæmorrhage. Hunter had left the coagulum to compress the lacerated vessels and stop the bleeding; had then poulticed the part and bled the patient, to keep the tissues soft and relieve pain. Suppuration had taken place, with discharge of clots, and eventual recovery with a slough. This case had not occurred in pregnancy, but it was my only guide, and I followed the plan of treatment there indicated. It was sometime before my patient recovered. She had a gangrenous slough, by which the whole labium was completely destroyed. The woman got well, however, though with only one labium, and the child also lived.

Now, gentlemen, if you look through all the text-books on midwifery in the English language, including translations into English, you will not find in one of them plain directions for the management of such a complication of labor as this. To be sure, thrombus of the vulva is now described in several books, though not in the text-books on obstetrics, with the exception of Cazeaux, as a complication of labor. Very shortly after this first case of mine, I found in *Dewees on Diseases of Females* (not his work on midwifery) a very clear description of this class of accidents. Meigs also, in his *Familiar Letters on Diseases of Women*, gives a pretty clear description of it, and also McClintock on *Diseases of Women*. There is a short ac-

count in *Simpson on Diseases of Women*, and another in Burns. Cazeaux has the clearest and best-written article on the subject, extending to several pages, and giving excellent instructions for treatment where the accident occurs previous to labor. Bedford, in his *Obstetrics*, gives a very fair description of this complication, but the directions for treatment are vague. The periodical literature of medicine does not lack reports of such cases, and in a French monograph by Deneux, published in 1830, there are sixty-two reported cases of thrombus of the labium, occurring before, during, and after labor; and out of this number twenty-two of the women died, and twenty-one of the children were lost.

I need make no apology, then, for endeavoring, in some measure, to supply the deficiences of your text-books upon this subject by bringing before you to-day a case which occurred in this hospital a week ago last Sunday. The patient is now being brought in, and the house-surgeon (Dr. Alexander C. Graham) will read you his report of the case.

Margaret ——, æt. 19, New York, primipara. Labor-pains began about 12 o'clock the night of January 15th, and continued with only slight intensity all the next day. At 5 P. M. (January 16th) the bag of waters broke, and the patient was immediately sent to the lying-in ward.

On examination no deformity of the pelvis or of the soft parts was found; the cervix was soft, moist, and dilatable, the os being an inch and a half in diameter. The vertex was presenting in the left occipito-anterior position. Fœtal heart heard on the left side below the umbilicus, 130 per minute. At 7:30 P. M. the cervix was fully dilated, and the uterine pains continued good and regular. In a short time the head descended to the inferior strait, and remained there till 11:10 P. M. The woman seemed to suffer a good deal of pain, and could not be made to bear down.

While making an examination at this time, I noticed that the right labium majus was more swollen than at the previous examination, and that it was rapidly enlarging. I supposed

immediately that I had to deal with a thrombus of the vulva, and endeavored by moderate and equable pressure, and the application of ice, to prevent its increase. The patient says she never noticed any tumor about the vulva during pregnancy, nor received any injury in that situation.

In twenty minutes the thrombus was as large as the fist, its mucous surface being purple; and the patient was suffering intensely. The labor-pains now ceased, the head being at the inferior strait, not yet having distended the perineum. While making preparations to incise the tumor, its coverings broke, and profuse hæmorrhage of an arterial character followed. The opening of the border of the mucous membrane was enlarged by incision; the clots turned out; and the cavity, three inches in depth, filled with a piece of ice. The head was not far enough down to make compression, and efforts to make the labor advance were unavailing. The hæmorrhage still continued, the cavity was tamponed with pieces of sponge soaked in the liquor ferri persulphatis; this, along with firm compression made by the hand, arrested the hæmorrhage.

An ounce of urine was now drawn from the bladder, and the fœtal heart was found to be pulsating on auscultation. Dr. Barker was sent for, and at twenty minutes after 12 o'clock, the patient being under chloroform, applied the short forceps. The child, weighing seven and three-quarter pounds, was born at half after 12. The placenta came away in a few minutes, The hæmorrhage was now frightful—a perfect stream of blood of a bright red color falling into the vessel at the foot of the bed. The opening was again enlarged by incision, and the cavity of the thrombus tightly plugged with pieces of cotton soaked in liquor ferri persulphatis.

The bleeding now ceased; but the pulse had become imperceptible, and the face was intensely pale. Two drachms of U. S. sol. morphiæ sulphatis in an ounce of whiskey were immediately given, and repeated in half an hour. After the first dose the pulse was 165, very small and weak. At 3:20 it was

130 and fuller. As much beef-tea as the patient would take was given, and she soon fell asleep.

At 10 A. M., January 17th, there had been no return of the hæmorrhage. The vulva was gently washed with warm water containing liquor sodæ chlorinatæ, great care being taken not to disturb the large clot. The urine was drawn off, and the parts were covered with a large piece of lint soaked in carbolic acid and glycerine (1 to 20). The vagina is to be thoroughly syringed, several times daily, with water containing the liquor sodæ chlorinat. Ordered two grains quinine and one-half grain of opium every six hours; stimulants and nutritious diet.

January 18th, 10 A. M., pulse 92; respiration 18; temperature 100°. The same treatment continued. There is no sloughing about the wound. While washing the vulva, part of the clot comes away, but there is no bleeding. At 7 P. M. pulse 120; respiration 21. This afternoon a poultice was applied to the vulva, and to-night patient passed her water. Her bowels were confined; the lochia are free.

January 26th. The patient has steadily improved without an unfavorable symptom. Her bowels were moved, several days after her confinement, with a laxative. The wound has cleaned off, and is granulating nicely. Ordered iron and quinine.

You observe that we kept everything scrupulously clean by a wash of chlorinated soda. By the use of the catheter, and by having the parts covered with glycerine and carbolic acid, all excoriation or irritation from the passage of the urine was prevented. The tumor has now almost entirely subsided, with but slight suppuration and no sloughing whatever. The patient has gotten along wonderfully well, and both she and myself are greatly indebted to the excellent judgment and care of Dr. Graham, who has had charge of the case. Willing to be made the means of saving others from the dangers by which she was threatened, the patient has consented to be exhibited. You see how healthy the tissues are looking, and that the parts are

almost of their natuaral size, though the tumor was as large as my fist. The woman has been placed upon the most nourishing diet. She has made no fuss through the whole, and has been altogether a most excellent patient. Now, she can be taken out and given a little whiskey.

This accident is one which may occur at any period of gestation; it may be found as a complication during labor; or it may not become manifest until after the labor is terminated. As I have said, it may occur during gestation, *before* labor, and I have met with several such cases, and also with a larger number, *after* labor; but the case just shown you and that which I first described are the only two which I have seen where it occurring *during* labor, although, as we have seen, the literature of the subject records many such cases. I have recently learned, too, that my colleague, Professor Wood, has had one case as a complication of labor, and that Professor Sayre has had two—all very distinctly marked. There are quite numerous cases reported occurring subsequent to labor; but then the accident is far less dangerous, and its fatality comparatively slight. Cazeaux's directions for the management of those cases belonging to the time of gestation are full and most excellent. I shall confine myself, therefore, to the diagnosis and treatment of the accident where it complicates labor.

Thrombus of the labium, or labial hæmatocele, has been mistaken for labial hernia, for inverson of the uterus, for thrombus of the bladder, for thombus of the vagina, for the fœtal head, for placenta prævia. Thus you see that in very many cases it has escaped diagnosis. It seems to me that, in all these cases, the mistake must have arisen from ignorance that such an accident was liable to occur. For if aware of this liability, a physician could hardly mistake the tumor for hernia or abscess, especially when taking into account its sudden development at the time of labor. The sudden and intense pain, the sudden and profound disturbance of the nervous system, the profuse and dangerous hæmorrhage, which occur—these, in connection with a careful physical examination, which at the present day

you can make with the patient completely anæsthetized, seems to me sufficient to establish the diagnosis easily.

Making an examination while the extravasated blood has simply infiltrated the cellular tissue and not yet lacerated it, you find the tumor hard and feeling very much like the fœtal head covered with the tumefied scalp. After laceration of the cellular tissue you get the sensation of fluctuation, and then the tumor could not be mistaken for the fœtal head.

The character of the hæmorrhage which occurs, and its want of coincidence with the uterine pains, should protect you from mistaking the case for one of placenta prævia. The sac may be ruptured, and the effusion of blood take place, either high up in the cavity of the vagina, or near the junction of the mucous membrane with the skin. In a case reported, it was found that the fœtal head rested against the walls of the sac, so that, whenever uterine contractions came on, the pressure of the head arrested the flow of blood, and there was instead a gush of liquor amnii. This, of course, made it plain that the hæmorrhage was not from the cavity of the uterus. In another case the rupture took place very high up; there was escape of blood into the cavity of the peritoneum; and the patient died from this hæmorrhage into the abdomen, the external discharge being very slight.

There is always intense pain until laceration of the cellular tissue takes place; after this the pain is less severe, because the parts more readily yield before the pressure to which they are subjected.

The moment the head has escaped, there is of course an excessive flow of blood. In one of Professor Sayre's cases a clot was at this time projected with great force, passing over the head of Professor Elliot, who was present.

Where extravasation takes place during labor the danger is very much increased, notwithstanding that Velpeau says there are then no vessels in these parts of sufficient size to occasion danger from loss of blood. It is the fact that in some of these cases the amount of blood lost is very great, so as to produce

death from this cause alone. In the cases apparently occurring immediately after delivery there is no doubt that the rupture of the vessels has been produced during the labor, although the extravasation has been delayed by the pressure of the head. In the case reported by Professor Sayre the labor had terminated without loss of blood—in fact, it was a remarkably dry labor. The child and the placenta had been delivered, and the patient had been watched for some little time, when there were symptoms of a recurrence of labor—strong bearing-down pains, which led my friend, who describes the case in his usual dramatic manner, to make an immediate examination. There was a tumor in the labium, feeling at first so much like a child's head that for a moment he feared he had made a blunder, and there was another baby to come. But palpation of the abdomen showed the uterus contracted. This case well illustrates the point that the tumor is at first exceedingly tense and hard.

There are one or two points to which I would call your attention, on which my experience is opposed to the statements of the writers upon this subject. First, it is asserted that the accident is almost always a consequence of varicose veins. Now, in neither of my two cases, in neither of Professor Sayre's, nor yet in Professor Wood's, were there any varicose veins at all. And I can say the same of the cases I have seen in which the thrombus appeared previous to labor. In the case just shown you it was evident that the blood came from a ruptured artery, for it was distinctly arterial.

Another point: Cazeaux states, and so do other authors, that the rupture occurs just as the head, or the presenting part, is escaping from the vulva. This was not the fact in my cases. The head was in the pelvic cavity, pretty well down towards the perineum, but not yet in the least distending either this or the vulva. It was the same in Professor Sayre's cases.

I come now to the management of this accident when it occurs as a complication of labor; for, as I have said, the authors referred to give you ample directions for its management when occurring in gestation. The better to enforce various

points, we will take the case just now before us as a type.

As soon as Dr. Graham recognized the large tumor, he made an incision and turned out the clots. There had been extensive laceration before the incision. One of the staff asked me whether it was not a mistake to incise at so early a period; whether it would not have been better to wait until just before the application of the forceps. Now let me recommend to you, gentlemen, as a habit of life, always to review your cases, be their termination favorable or unfavorable, and ask yourselves if the treatment might not have been improved. I was glad to hear the question I have mentioned, for it showed this habit; and now I will answer it. I think the early incision was not a mistake, but it was the very best treatment; because, the longer incision was postponed, the greater would be the amount of extravasation, the greater the distention of the parts, the more extensive the laceration of their areolar tissue. The argument of Hunter, that the clot would act as a compress, a tampon, to arrest the hæmorrhage, is, I think, altogether erroneous. In my own case, where I followed his plan, there was extensive sloughing, and the whole labium was lost. In this last case nothing of the kind has occurred; and so it was in both of Professor Sayre's. Incise at once, then—so as to relieve the parts from the pressure, and relieve the patient from the shock of the severe pain attending the tearing of the tissues, a shock far greater even than that of ordinary labor-pains (we can arrest the hæmorrhage promptly and surely by applying directly to the bleeding surface the powerful styptic, persulphate of iron)—turn out the clots, find out the exact point of laceration, and apply this stypic.

The next question was between speedy delivery by artificial means, and waiting till the system should recover from the shock, and trusting Nature to deliver the woman. I decided to deliver as quickly as possible with safety to the patient, and for this reason: I have already shown you that the accident is not due to varicose veins; but the exciting cause is arrest of the the venous circulation by the mechanical pressure of the presenting part of the fœtus. If this be so, the sooner the pressure is

removed, the sooner will the danger be over, and the less will be the injury to the parts. Deliver as soon and as rapidly as possible, and be prepared to meet the great gush of blood that you must expect as soon as this is accomplished, by the means adopted in the present case. Apply compresses of cotton batting, saturated with solution of persulphate of iron, directly to the bleeding part, and keep up pressure till the hæmorrhage stops. This patient was reduced almost to the last extremity by loss of blood; but these measures arrested the hæmorrhage, and whiskey and morphia brought back the pulse, which had become imperceptible.

Every author, I believe, directs that a tampon be applied. I must say, and with the strongest conviction that I am right, that I consider this direction a very bad one. In the first place, there is no need of the tampon after once arresting the hæmorrhage by the means I have described. In the next place, if the vagina is tamponed, you have all the lochial discharges retained in it to decompose; you have, moreover, pressure upon the urethra and pressure upon the other parts that have just been subjected to severe contusion. But the safety of the patient requires you to guard against every possible danger of sloughing; and against decomposition, whether of the discharges or of the blood effused, at a time when the system is especially liable to the absorption of poison. I think the greatest danger in these cases is from septicæmia. So you make use of antiseptics. I was particularly struck by the fact that our distinguished countryman, Dewees, many years ago, recommended pyroligneous acid as an application to these cases of laceration, thus anticipating the antiseptic treatment by carbolic acid, now become so famous. My colleague, Professor Sayre, used compresses of oakum impregnated with carbolic acid, through which the discharges were allowed to ooze. We employed a wash of glycerine and carbolic acid, which protected the parts from fissure and excoriation by the irritant discharges or the urine.

It is an important point in the dressing not to detach the coagulum formed by the persulphate. It presents a black, ugly-

looking mass, which you are strongly tempted to clear away; but you must never remove any part of it, except such as is completely loosened. If you avoid exciting it yourself, I think there is little danger of secondary hæmorrhage. Still further to guard against such an event, this patient was not allowed, for some time to evacuate the bladder spontaneously, but the catheter was employed. After the coagulum had become detached, the parts looked a little irritated, and an emollient was applied in the form of a poultice. The result you have seen.

In looking over the records of cases like this, I find they have been treated by bleeding and an antiphlogistic regimen. This case has been treated upon the principle, directly opposite, by restoring the exhausted vital powers as quickly as possible—by opium, the great restorative, alcohol, quinine, iron, and the most nutritious diet. I think she speaks well for the treatment.

Thus, gentlemen, I have occupied the hour in endeavoring to prepare you for an emergency which is not very rare, and may occur to any one of you—an accident which has heretofore been attended with a fearful fatality, both to mother and child, but which I hope more enlightened practice may render less dangerous in the future.

Dr. W. T. Lusk has kindly furnished the following translation and abstract from Scanzoni's *Lehrbuch der Geburtswulfe*, published in 1867, and our readers will be interested in comparing his views with those of Professor Barker:

Thrombus of the vulva, or labial hæmatocele, occurs oftenest during or shortly after labor. Rupture of small vessels and slight extravasations beneath the mucous membrane of the genital organs, and into the connective tissue of the vicinity, are the pretty constant accompaniment of every normal labor. In fifteen cases of thrombus vaginæ, only one was connected with varicose veins. Tumor increases slowly, if the vessel alone ruptures, but much more rapidly where there is at the same time considerable separation of the contiguous cellular tissue. In Scanzoni's fifteen cases the tumor occurred eight times before

expulsion of child, six times during the delivery of the placenta, and once, in a twin case, between birth of first and second child.

Scanzoni lost only one of his cases: viz., from puerperal fever. Dangers are from ichorous decomposition of the retained clots. Pyæmia may be predicted in extensive extravasations which are not evacuated in good season.

Treatment.—The speedy evacuation of the blood from the cavity is the best remedy to avoid interminable abscess formation. Scanzoni applies forceps and delivers immediately, and only incises the tumor first where it is likely to prove a mechanical hindrance to birth. After extracting the child he puts pieces of ice and injects cold water into the vagina to control increase in size, and, if this fails, tampon of compresses dipped in ice-water. Do not open so long as it continues to increase. If, after opening, hæmorrhage is excessive, use ice, and in case of failure, plug cavity with charpie, and plug vagina.

ART. II.—PHYSIOLOGICAL PECULIARITIES—SOME CURIOUS FACTS CONCERNING THE PERSONAL APPEARANCES OF GREAT MEN—PHYSICAL SIZE AND MENTAL CALIBRE.

Dr. E. O. Haven contributes an interesting article to the "Western Monthly" on the subject of "The Personal Appearance of Great Men," in which many curious facts are developed concerning the relations of physical size and mental calibre. The inference of his treatment would be, that these relations are entirely arbitrary, which is no doubt true. For instance: Plato, originally called Aristocles, received his name, which signifies *broad*, from the size of his shoulders, and was a large man, thoroughly trained in athletic exercises. Aristotle, who divided with him the empire of philosophy, and added to it a large domain from science, might have been named *Narrow;* for he was a small, light man, though probably healthier

than his rival. Socrates, their teacher, was short and ugly, and often likened to a Silenus; though in one place it is stated that when he was young he was handsome.

It is remarkable that the variety in bodily appearance and endowments increases with the degree of civilization; life in the savage state being more monotonous, intermarriages more frequent, and the limited tribes or clans descending into a uniformity in physical and mental character. Wild plants and animals of any one species are nearly alike; the cultivated differ as much as civilized men.

Dr. Beddoe, president of the British Anthropological Society, states, as the result of several thousand careful measurements, that the average height of adult Englishmen, and also of adult Irishmen, is between five feet six and five feet seven inches, while Scotchmen are, on the average, half an inch taller. The average height of Germans is about the same as that of Englishmen, and the average of native Americans will not surpass that of Scotchmen. The average weight is not much above 140 pounds.

When a man of gigantic stature is remarkable also for extraordinary intellectual and moral ability; when he has power to govern, or magnetic eloquence, or occupies a conspicuous station, there can be no question that he derives great additional influence from the size of his body. Constantine, a giant in body, at the head of his army, or on the throne provided for him in the great Ecumenical Council at Nice; Charlemagne, towering above others in height, and able to command and reconstruct the broken elements of Europe into a new empire; Peter the Great, who introduced Russia into the sisterhood of civilized nations; Washington, the father of his country; all satisfied that instinct which loves to see an imposing appearance associated with intellectual power and personal authority. Yet all these men had as counsellors men of small bodies, but perhaps acuter perceptions. It is pleasing to think of such eloquent orators as Nicon, the reformer of the Greek Church, seven feet high and well-proportioned; Luther, whose sledge-

hammer-like gestures and powerful voice were so appropriate to his thoughts and passion; the elder Pitt, a man of extraordinary size, holding the British Parliament alternately charmed and terrified, if not convinced by his eloquence; Drs. Mason and Olin, whose sonorous sermons acquired extraordinary and adventitious power from their wonderfully large bodies; Daniel Webster, "a steam-engine in breeches," as Sidney Smith felicitously described him. Such men (and it would be easy to multiply instances) show the peculiar power of high mental endowments when clothed in large bodies.

But facts will not allow us to accept the materialistic hypothesis that there is any connection between the shape or weight of the body and power of mind. Soul, whatever it may be, is not dependent on the size, nor on any known quality, of the engine with which it is connected, for either amount or intensity of action. Unobserving men, like savages, usually think so, but the facts are against the theory. Spence relates that Pope, the poet, was with Sir Godfrey Kneller, a celebrated portrait-painter, one day when his nephew, a Guinea slave-trader, came in. "Nephew," said Sir Godfrey, "you have the honor of seeing the two greatest men in the world." Kneller, a little man bodily, had a sufficiently high opinion of himself, as well as of his little friend, Pope, and was hardly prepared for the reply: "I don't know how great men you may be, but I don't like your looks. I have often bought a man much better than both of you, all muscles and bones, for ten guineas."

Byron's Height.—Byron informs his readers that he was exactly "five feet eight and one-half inches in height," slight and muscular—about two inches taller than the average of his countrymen, and about three inches taller than English lunatics; for Dr. Beddoe has ascertained that the adult male inmates of lunatic asylums in England are one inch shorter than their rational brethern—perhaps because litte men have a more nervous temperament, or perhaps because the larger men outside outvote and overpower their smaller brethren, and put them in lunatic asylums for safety!

The philosopher Burton, in his "Anatomy of Melancholy," treats of almost everything under the sun. When he comes, in his *olla podrida*, to mention our theme, he betrays the prejudice growing out of his own appearance, and says: "Æsop was crooked; Socrates purblind, long-legged, hairy; Democritus, withered: Seneca, lean and harsh, ugly to behold;—yet show me so many flourishing wits, such divine spirits! Horace, a little, blear-eyed, contemptible fellow, yet who so sententious and wise? Marsilius Ficinus, Faber Stopulensis, a couple of dwarfs; Melancthon, a short, hard-favored man, *parvus erat, sed magnus erat*, etc.; yet of incomparable parts, all three. Galba, the Emperor, was crook-backed, Epictetus, lame; that great Alexander a little man of stature; Augustus Cæsar of the same pitch; Agesilaus, *despicabili forma*; Boccharis, a most deformed Prince as ever Egypt had, yet, as Diodorus Siculus records of him, in wisdom and knowledge far beyond his predecessors. A. D. 1306, Uladislaus Cubitatis, that pigmy king of Poland, reigned and fought more victorious battles than any of his long-shanked predecessors. *Nullam virtus respuit staturam*—virtue refuses no stature; and commonly your great vast bodies and fine features are sottish, dull and leaden spirits. What's in them? *Quid nisi pondus iners stolidæque ferveia mentis.* What in Osus and Ephialtes, (Neptune's sons in Homer), nine acres long? What in Maximinus, Ajax, Caligula, and the rest of those great Zanzummins, or gigantical Anakims, heavy, vast, barbarous lubbers?"

Robespierre—perhaps the most remarkable of all the characters who figured in the great French revolution, and in some respects one of the strongest men the world has ever seen, seemingly an incarnation of will—was only five feet and two or three inches in height, his complexion livid and bilious, his eyelids constantly blinking, and his shoulders and neck subject to frequent spasmodic motions. And yet he swayed both the multitude and the assembly by his logic and eloquence, and by the sheer force of intellect mastered the storm longer and more successfully than any other man. Murat, his rival, was not even five feet high,

his face hideous, and his head monstrous for size. Danton, on the other hand, whose tremendous eloquence nerved the new republic successfully against foreign aggression, was of a large and powerful frame, and had an extraordinarily loud voice.

Peter, the Hermit, whose eloquence stirred all Europe to the crusade, according to Berington in his edition of Abelard and Heloise, was a tall, thin man, with a ringing voice; Whitfield was stout; Wesley was small. Niebuhr, who revolutionized the views of the world on Roman history, was five feet six inches in height, and slender; Schleirmacher, who turned theologic thought into a new channel, small and deformed. Gibbon informs us that he was feeble when a child, small as an adult, but corpulent, and his head was remarkably large. This was true also both of Sir Isaac Newton and of Cuvier. Dr. Kane, who endured both torrid heat and polar cold better than any of his companions, "was five feet six inches in height; in his best health he weighed about one hundred and thirty-five pounds." Mr. George Ticknor relates that Talleyrand said to him, in 1816, pointing to a potrait of Alexander Hamilton, that the three greatest men he had known in his time were Napoleon, (small but heavy), Charles Fox, (large and corpulent), and Alexander Hamilton, (small).

Bismarck, whose name is now more potent than that of any other man in Europe, is more than six feet tall, well proportioned and muscular; Thiers, who represents France before him, is "physically about as insignificant a specimen of humanity as could be picked out of a crowd."

ART. III.—COMPOUND SOLUTION OF IODINE IN CHRONIC DIARRHŒA. By E. L. SHURLY, M. D., Manistee, Mich.

Of all diseases abounding in this region, we have found none more intractable or formidable than chronic diarrhœa, which is

always of malarial origin, being preceded or accompanied by intermittent or remittent fever, and more or less hepatic or splenic enlargement; while the patient's history and appearance betokened the amount of illness he must have undergone before the onset of the diarrhœa.

For the treatment of these cases, heretofore, we have persistently employed all of the astringents, tonics, etc., of reputed efficiency, alone, and in connection with quinia! Only succeeding, however, in limiting the disease until "Jack Frost" had made his welcome appearance, when the patient would almost or wholly recover. Driven by these unsatisfactory results to seek some new mode of action, we accordingly, in the next case which presented itself, prescribed five drops of the com. sol. iodine, (Lugol's solution,) in one-half tumbler of water, four times daily, with a view of reducing the hepatic enlargement present, on the theory of causation; when, after three days of treatment the fact was revealed that the iodine had entirely controlled the diarrhœa, and greatly relieved the patient.

Thus several more cases of this class were treated with equally satisfactory results—some having hepatic or splenic enlargement, while some were free from these complications; all of the cases, however, being associated with miasmatic poisoning.

We have, therefore, been induced to publish this note, in order that the virtue of this remedy, in respect to curing chronic diarrhœa in different localities, and under different circumstances, may be tested and made known.—*Buffalo Medical Journal.*

ART. IV.—NEW YORK ACADEMY OF MEDICINE—Stated Meeting February 16, 1871—Dr. E. R. PEASLEE in the Chair—Discussion of Dr. GOUVERNEUR M. SMITH'S Paper on Diabetes.*

Dr. William H. Draper opened the "Discussion of Diabetes" with the following remarks:

The elaborate historical review of the pathology of diabetes which was read by Dr. Smith at the last meeting of the Academy, illustrated very forcibly what is true of so many problems in disease, that what we sometimes falsely call progress in pathology is only a substitution of one theory for another, a change of base which often involves us in greater difficulties than the one we abandoned.

When Bernard announced in 1849 that diabetes mellitus may be artificially produced in animals by irritation of the floor of the fourth ventricle, the new pathology took definite shape, and diabetes became a functional disease of the liver, the consequence of irritation, central or peripheral, of the vasomotor nerves that supply this organ. The experiments of Harley and others, demonstrating that liver-glycogenesis could be excited by reflex as well as central irritation, seemed to confirm this view. In stating the serious objections to the exclusive adoption of this theory of glycosuria, we desire to suggest some reasons for the belief that glycosura is a symptom, not of one, but of numerous morbid conditions.

The principal objection to the exclusive adoption of the theory of diabetes which is based upon liver-glycogenesis, is a clinical one. It is well known that certain cases of glycosuria are always controlled, and sometimes entirely cured, by restriction to animal diet. These cases, and they are by no means infrequent, neither require nor admit the glycogenic function of the

* While the pathology of diabetes mellitus is not elucidated in this admirable debate, a study of the discussions involved will enable the reader to grasp all of the varied and plausible views advocated by the best writers of the present day.—ED.

liver for their explanation. They are explained satisfactorily by that defect in the assimilative process by which the conversion of amylaceous and saccharine food is checked; the series of changes by which the non-nitrogenous elements of our food are ultimately converted into CO_2 and water is interrupted at the formation of glucose. This is the old chemical theory of Bouchardat, and one which is certainly in accordance with the facts observed in the class of cases to which we have alluded. Again, if glycosuria was the necessary result of the excessive formation of animal sugar by the liver, is it not strange that morbid anatomy should not present us with some constant lesion of the liver as the result of the long-continued hyperæmia to which the organ must have been subjected? It is well known that the most diverse lesions have been found in this disease in the lungs, liver, kidneys, and alimentary canal, and that excepting the nerve-lesions, which have been found in a few cases, pathological anatomy has furnished no clue to the seat of the disease.

It is, moreover, worthy of mention that the records of cases of lesion of the floor of the fourth ventricle, the locality in which it is claimed irritation gives rise to glycogenesis, do not uniformly present the symptom of glycosuria in their clinical history. My friend, Dr. Seguin, has furnished me with four such cases, in which nothing is said of the occurrence of glycosuria, though in all there was extensive lesion involving the ventricle and the upper part of the medulla. Again, it may be objected that the experiments upon which the reflex origin of diabetes mellitus is predicated prove more than the exclusive hepatic origin of the disease. Dr. Harley, in his excellent monograph upon diabetes, likens the production of sugar in the liver from reflex irritation to the muscular contractions which result in the frog's limbs from the application of the galvanic current to the sensory motor circuit. In the glycogenic function of the liver, he says, "The pneumogastric is the analogue of the sensory, and the spinal cord and splanchnic of the motory nerves of the frog's limbs, so that an irritation applied to any portion of the branches of the pneumogastric nerves, spinal

cord, or sympathetic reflex glycogenic circuit, is as effectually followed by a secretion of sugar as the application of galvanism to the sciatic nerves of the frog's limbs is followed by muscular contraction." Thus, he continues, "Diabetes can be artificially established by applying the irritation to the extremities of the pneumogastric in the liver, as when stimulants are injected into the portal vein; or by irritating the pulmonary branches distributed in the lungs, as when chloroform is inhaled; or by applying galvanism to the cervical portion of the nerves, or by irritating their roots, as when injury is applied to the floor of the fourth ventricle; or by acting on the downward chain, as, *e. g.*, when the splanchnics are divided." Now, this analogy is not quite so plain as it at first appears. The pneumogastric is a peculiar nerve, not only in the extensive distribution to some of the most important vital organs, the heart, lungs, liver, and stomach, but in its endowment with a specific sensibility, by which it plays an important part in the maintenance of the vital functions, so that an irritation applied anywhere in its course, or in the course of its numerous and complicated connections, may be followed by a variety of effects; and it seems just as possible that the glycosuria, which is said to be produced through the irritation of its pulmonary, hepatic, or gastric branches, is the result, in some cases at least, of a disturbance of the pulmonary or gastric functions, as of the hepatic; and this leads us to speak of the second point to which we wish briefly to call attention, viz., the interpretation of the neurotic element in the etiology of diabetes. The generally accepted explanation of the experimental production of glycogenesis through nerve irritation is, that it produces dilatation of the hepatic blood-vessels, a consequent hyperæmia of the liver, thus increasing its glycogenic function. Dr. Dalton, in the succinct and clear review which he gave at the last meeting of the Academy of the subject of hepatic glycogenesis, described the numerous and diverse conclusions which have been drawn by different experimenters in this field of inquiry. Admitting, however, what seems to be established by satisfactory evidence,

that sugar is formed in the liver, are we, therefore, justified in referring glycosuria in all cases to an exaggeration of this function?

This certainly has not been satisfactorily proved, and it has been reasonably suggested that the appearance of sugar in the blood of the general circulation, and in the urine, may be due sometimes to a defect in the pulmonary function, through which the normal sugar production of the liver escapes oxidation. We think that a careful consideration of the physiological experiments, as well as of the pathological conditions under which glycosuria occurs, will show that quite as marked disturbances were produced in the pulmonary as in the hepatic circulation by these experiments and lesions; and, therefore, that the glycosuria may be reasonably regarded as the result, in some cases, at least, by a disturbance of the pulmonary function. Dr. Brown Sequard has recently called attention, in a short paper in the London "Lancet," to the production of hæmorrhage, anæmia, œdema, and emphysema in the lungs, by injuries to the base of the brain. He states, as the result of a large number of experiments, "that in almost all cases of injuries by crushing or section of the pons varolii, ecchymoses were found in the lungs. Sometimes the whole lung was crowded with effused blood, and real pulmonary apoplexy existed. In some instances the effusion took place in the bronchial tubes. Injuries to other parts of the base of the brain, especially the crura cerebri and the crura cerebelli, are sometimes followed by the same effects on the lung, and it is extremely probable that a slight pressure upon the pons varolii by effused blood is sufficient to produce it. Injuries to the medulla oblongata, and to the spinal cord, have but very rarely caused an effusion of blood in the lungs." He further states, "A hæmorrhage is not the only immediate effect that can be observed after an irritation of the base of the brain by crushing or cutting; an anæmic condition, œdema, and emphysema can also be produced;" and M. Ranvier, a distinguished micrographer, who assisted Dr. Brown Sequard in these experiments, found "that some small parts of

the lungs, which were found perfectly white, were absolutely deprived of blood, no doubt through a spasm of the blood-vessels having emptied them of their contents." May not this be the explanation of the so-called tubercular lesions which are found to complicate some cases of diabetes?

When we consider the fact that the sugar found in the blood of the right side of the heart disappears in the passage through the lungs, it seems reasonable to suppose that the presence of sugar in the general circulation and in the urine, may sometimes depend upon defective pulmonary function, as well as upon excessive formation in the liver. It may be objected, that if this were the case, the presence of sugar in the urine would be oftener observed, considering the great frequency of pulmonary lesions; but it is possible, as Roberts observes, that the existence of pyrexia, in which there is an excessive degree of oxidation, may account for the sugar not appearing in the urine.

Dr. Draper alluded very minutely to the large number of experiments made by the distinguished physiologist, Schiff, in which he succeeded by a variety of mechanical irritations in inducing artificial diabetes. These were mentioned because they illustrate very remarkably the numerous varied morbid conditions under which sugar may make its appearance in the urine.

It is reasonable to infer from the results of Brown Sequard's experiments, which we have quoted, that there must have been pulmonary lesions in most, if not all, the cases which Schiff describes. Those experiments, especially, in which glycosuria was produced by interference with the circulation, must have caused pulmonary engorgement, and so determined a disturbance of function which would manifest itself by the phenomena of defective oxidation; and among these the presence of sugar in the blood may surely be reckoned.

As Dr. Smith confined himself mainly to the development of the neurotic pathology of diabetes, we propose briefly to explain the hypothesis which makes the proximate cause of dia-

betes the sub-oxidation of the animal and the food sugars. This hypothesis is based upon the fact, that every atom of nitrogenous or non-nitrogenous food that enters the body passes through a series of changes that terminate in the formation of urea, carbonic acid, and water—these latter being the ashes, so to speak, that leave the body when the combustion of the food, through the action of oxygen, is complete. Physiological chemistry has not yet determined the number or the nature of the links in the chain of transformation effected in the food by the action of oxygen, but they are doubtless analagous, to a certain extent, to the changes observed in the oxidation of the substances we use as food, which may be produced by artificial oxidation outside of the body. We know, *e. g.*, that starch is convertible into sugar, and that sugar is convertible into alcohol and CO_2 outside of the body by a process of oxidation; and physiological experiment has demonstrated that starch, when acted upon by the saliva or pancreatic fluid, is converted into sugar.

Now, we know that certain cases of diabetes are relieved, and in many instances cured, by a withdrawal of amylaceous and saccharine food. The inability to convert or assimilate this kind of food seems to constitute in these cases the essential cause of the glycosuria. We are ignorant of the cause of this interruption to the complete conversion of the starch and sugar; we do not know whether it is that there is an insufficient amount of proper ferment, supposed to exist in the saliva and intestinal secretions, or whether there is, what amounts to the same thing, an excess of non-nitrogenous food, or whether there are other inexplicable conditions wanting to the thorough oxidation of this form of food. Whatever may be the cause of the failure in these cases to convert the non-nitrogenous food into its ultimate elements, the fact seems incontestable that there is a distinct variety of diabetes mellitus which is produced solely through this defect in the process of digestion, and is entirely independent of hepatic glycogenesis. But there is another class of cases in which dietetic restrictions are followed

by only a partial diminution in the glycosuria—and these are cases in which the failure to convert the food sugars extends to the animal sugar also. Here the proximate cause of the symptoms is the defective oxidation of the sugar formed in the body. And, as we have endeavored to show in the first part of this paper, it is impossible for us to determine, in the present state of science, whether the disease is in these cases the result of excessive hepatic function, or of deficient pulmonary function, or of more obscure derangement in process of nutrition throughout the body. It may be, and it doubtless is the fact, that the presence of sugar in the blood and urine, in the cases where the power to convert the animal sugars is lost, is the result sometimes of excessive formation, sometimes of deficient supply of oxygen through loss of pulmonary function, and sometimes through diminished activity in the chemical transformations that take place in the tissues.

This statement brings us naturally to the third point to which we wish to call attention, viz., that glycosuria is a symptom not of one, but of numerous morbid conditions. All that we can infer from the presence of sugar in the urine, is an incomplete combustion; it may be from excessive ingestion of farinaceous and saccharine food; it may be from excessive formation of animal sugar; it may be from insufficient supply of oxygen, or from some yet undiscovered defects in the process of healthy nutrition.

The hypothesis of sub-oxidation, as a solution of the phenomena of diabetes mellitus, becomes exceedingly interesting when viewed in its relations to the theory of food as the source of heat and mechanical power developed in the animal body. It is impossible to enter here upon an explanation of this theory, which has been the subject of experimental inquiry by Franklin and Houghton, in England, and by Donders, Fick, and others, in Germany. It is sufficient to say, that according to this theory, physical force of all kinds is developed in the body, not from the destruction of tissue, as was formerly supposed, but entirely from the combustion of the food. If this is the

case, we have in the imperfect combustion of the farinaceous and saccharine food in diabetes an explanation of some of its most striking symptoms. We refer to the diminished temperature and the great muscular debility. Dr. Bence Jones states that some estimate of the loss of power in those who suffer from diabetes may be obtained by calculating the amount of carbon which escapes in twenty-four hours in the sugars unoxidized. In extreme cases from 20 to 40 ounces of sugar may be lost in twenty-four hours. This is equal to from 8.4 to 16.8 ounces of carbon, and, if fully oxidized, would generate a force capable of raising from ten to twenty millions of pounds one foot high.

If the proximate cause of the disease lies in defective oxidation, the manifest indication is to improve by every possible means the process of oxidation. The medicnial remedies, which, of all others, may be said to favor this process most markedly, are iron and the alkalies. The alkalies have long maintained a reputation in the treatment of diabetes. It may be objected that the alkaline treatment fails in some cases, but this failure can hardly be urged against the utility of the alkalies in certain cases, for this is incontestable, or the correctness of the explanation, as regards its action.

It only confirms the idea that diabetes is not always the same disease, that it varies in its causes, and until we have solved all the mysteries of its etiology we cannot expect unvaried success in its management. The neurotic pathology of the disease has not as yet suggested any course of therapeutical management which has met with any pronounced success.

It is a melancholy conclusion, but it is the only conclusion to which we can arrive after a fair review of the present knowledge of diabetes mellitus, that however much the pathology of glycosuria has been elucidated by the discovery of hepatic glycogenesis, we can hardly claim that, so far as the treatment of the disease is concerned, we are much better off than our predecessors were fifty years ago.

In closing his interesting remarks, Dr. Draper gave the fol-

lowing legitimate conclusions in regard to the present state of knowledge of the pathology and treatment of diabetes:

1st. That diabetes mellitus is clearly a disease of diverse origin.

2d. That the presence of sugar in the urine is an evidence of defective oxidation, sub-oxidation being the proximate cause of glycæmia and glycosuria.

3d. That in certain cases the source of the sugar is the food.

4th. That in those cases where the glycosuria continues after the withdrawal of all source of sugar from the food, the disease depends either upon excessive formation of animal sugar, or upon loss of power to convert the sugar that is normally produced.

5th. That the relations of nerve-lesion to glycogenesis are as yet imperfectly understood, and that in the present state of our knowledge we cannot say whether in diabetes the fault is excessive sugar production or defective sugar destruction.

6th. That for all practical purposes the recognition of deficient oxidizing power in diabetes is the most valuable point that has yet been established in the pathology of the disease.

At this stage of the discussion the President presented Dr. Ormsby, of Albany, to the members of the Academy, and then called on Dr. Alonzo Clark for remarks concerning the *pathology of diabetes*. Dr. Clark stated that after two lectures at college and the usual professional labor during the day, he was not up to it. At some future time after the college commencement he would be happy to enter into the debate. The speaker was pleased with the preceding paper, and said that we could not go further into the pathology and treatment of diabetes than Dr. Draper had gone. His opinion was, that the pathology of the lungs, in connection with diabetes, had not been enough attended to.

Dr. John C. Peters had seen but few cases, but contended that there were two varieties of diabetes mellitus:

1st. That variety which comes from the destruction of animal sugar, and is amenable to treatment.

2d. The form which comes from the non-destruction of animal sugar, and is more serious.

The origin of the affection, he believed, was the paralysis of the vaso-motor nerves, and remedies to obviate this are called for. Dr. Bence Jones advocated iron and alkalies. Vichy, water and alkalies are beneficial, but better adapted to *stout* than thin patients.

In answer to the suggestion of the President as to the geographical limits of the disease, Dr. Abraham Jacobi replied that, being absent from the discussion of the subject by Dr. Smith, he did not know how far he had gone into the subject, but in a medical circle in this city, where diabetes mellitus was introduced, he related the only two cases which he had seen in his life. One case of diabetes insipidus had been under his observation since then.

In looking up the statistics of the disease he found the following facts, which were unsatisfactory to him: One author states that it is rare in Germany and Russia; another puts down only three cases in southern Germany; and another has seven cases in Padua, Italy. In London he finds one case to 1,400 deaths; in Geneva one to 2,000 deaths. It is rare in East India, and tropical climates generally. The doctors in Peru do not know the disease. The islands of Ceylon and Sumatra are said to contain a large number of cases.

Dr. Jacobi did not know why the affection should be rare in hot climates, only that vegetables compose a large portion of the food; but he had been thinking it was a nervous disease. There were a number of well-authenticated cases following strong mental emotions, or moral emotions generally. Hard mental work probably produced as many of the cases of diabetes as of insanity, Professor Sequin, of Vienna, has a list of 140 cases of diabetes, seen at Carlsbad, and a large proportion were Jews, being thirty-five per cent. of the whole. The Jews, perhaps, produced it by their way of working and living. In this country hard work and anxiety may cause it more and more, as well as insanity.

In order to satisfy himself that it was more frequent in this country, he examined statistics, and found that there were in Boston, from 1811 to 1839, 18 deaths from diabetes; in New York city, from 1805 to 1821, 30 deaths; in Philadelphia, from 1831 to 1840, 20 deaths. The census of the State of New York for 1865 exhibited 81 deaths, from this disease, out of 37,027 deaths—one in 457—showing more in our State than abroad. Out of 25,167 deaths recorded by the Metropolitan Board of Health of New York for 1869, there were 13 cases of diabetes; of these 7 were native Americans, and 6 of foreign birth—one death in about 2,000 cases, as in Geneva.

Dr. Peaslee inquired of Dr. Gouvr. M. Smith as to the number of deaths in the black race, and of Dr. Jacobi how early in life diabetes occurred.

Dr. Smith informed him that in his fifty-eight cases two were found in the black race.

Dr. Jacobi believed it was rare under ten years. He referred to the case mentioned at length by Dr. Smith, which happened as early as one year and eleven months. The average of Sequin's cases were between 30 and 35 years.

The President called upon Dr. Robert McIlvaine, late of Ohio, who responded as follows: He was inclined to doubt the diagnosis of some of the cases put down as diabetes, and thought the difficulty many times was due to an enlargement of the prostate gland. Physicians might put down cases as diabetic, because the patients were told by some one that they had diabetes. He alluded to a case in point, where a patient told him that he had this disease. The patient was asked, "Who told you so?" "A spiritualistic doctor," was the reply.

During the five years spent in Paris he only saw two cases of diabetes—both under 30 years of age. These were put on cane sugar. Some London practitioners advocate this mode of treatment.

An allusion was made to the extensive formation of sugar in uterine life; and Bernard's recent experiments upon dogs in relation to the saccharine supply of sugar.

While visiting the Banks of Newfoundland, in 1859, he found that the cod-livers secrete sugar, and are not unlike the livers of other fish and animals, notwithstanding the laudation of the medicinal effects of cod-liver oil.

Dr. Alonzo Clark called attention to the infrequency of the disease in the country, from statistics, and in explanation said, they were more frequent in this city, because patients resorted here for treatment. He recalled a half dozen cases, one 13 years; another, a case of Dr. Linsly, of 10 years. All of these were under 15 years of age.

Dr. Gouverneur M. Smith remarked: At the last meeting, Mr. President, I occupied the attention of this Academy for so long a time in presenting the subject of diabetes, that it is scarcely incumbent upon me to add anything further on this occasion. It must suffice to allude to a few points which have just been referred to, and to add a few facts to those given on opening this discussion. I have before said that many questions relating to diabetes are still obscure; but with the information we now possess, the neurotic theory concerning the origin of the disease explains more of its peculiarities than any other which has been offered. Bernard's experiments in relation to the artificial injuries of different parts of the fourth ventricle, as inducing either, first, an increased diuresis; second, an augmented flow of urine containing sugar; or third, simply glycosuria without any augmented quantity of urine, have each their analogues in disease; the first, corresponding with diabetes insipidus, the second with diabetes mellitus, and the third with cases occasionally observed. As *centric* lesions are often found in diabetes, and as we are aware that *peripheral* irritation and lesions can also induce mellituria by a reflex influence, we are furnished with an explanation of the pathology of many cases of the disorder.

The gentleman has stated this evening, that his attention has been called to a report of four cases in which autopsical examination revealed disease of the fourth ventricle, but in which there had been no diabetes. Nature is sometimes tolerant of organic lesions, even of those occurring in the brain. We may

detect by autopsy that the kidneys are in an advanced stage of confirmed Bright's disease, and yet the patients may never have suffered with any symptoms indicative of such condition, or at least not until within a few days of their death. In the cases of disease of the brain alluded to, the urine may not have been carefully analyzed. It has been shown that in some instances the urine is not increased in quantity, and an examination of the renal secretion for sugar may have been overlooked; other symptoms masking the diabetes. Sufficiently numerous observations have been made to prove that diabetes is sometimes due to centric lesions. Dickinson, Ogle, Richardson, Lockhart Clarke have encountered them, and I have cited a case in this city, which also presented them. That such lesions are *not pathognomonic* of the disease has been distinctly stated, and when they are not found the lesions are peripheral, and may have excited the malady by a reflex influence. Another group of cases depends on centric or distal irritation, and these are the ones which yield more promptly to treatment. Still other cases, more readily remediable, are those occasioned by errors in diet. These points have been partially illustrated in the table of twenty-six cases before presented.

It has been suggested here, that the disease may be referable to a simple defect in vital chemistry, as cases may be partially relieved by a diet regulated according to chemical rules. Every article of food and every drug which we employ is a chemical agent, either a compound or an element, and the same reasoning would attribute every disease we encounter to some chemical cause.

It has been said that the sugar may not be morbidly generated by the liver in diabetes, but merely evolved through the lungs. Such view need not invalidate the nervous origin of the disorder in certain cases. In various cerebral diseases, and in artificial injuries of the brain, the respiratory functions are disturbed. Melituria may accompany whooping-cough and asthma; relief for the latter affords relief for the former. Pulmonary tuberculosis may be intercurrent to diabetes, and conversely

may occasionally excite polyuria, either by impairing respiration or by a reflex influence. Febrile excitement, however, has a tendency to prevent such sequel.

As the relative frequency of the disease has been alluded to this evening, it may be interesting to repeat that out of 80,016 deaths in New York city, for 3 years and 3 months, but 58 were from diabetes, or 1 death to 1,379. In one year the proportion was 1 case to 45,454 of the population, in another, 1 in about 111,111. Thirty-eight were born in the United States; 22 in foreign countries. Two of the former were of African descent.

An additional fact is herewith presented confirming a view presented at the last session. Sugar occurs in the milk in the largest proportion of any of its organic constituents. Physiologists contend that this lactose is prepared *de novo* in the breasts, and is not dependent upon the quantity of sugar in the blood, as is inferred by *artificially* injecting sugar into the veins of animals which, under such circumstances, is eliminated by the kidneys. It was suggested, it will be remembered, that the uterus towards the close of gestation, and the *breasts* during lactation, might excite increased hepatic sugar-formation by a reflex influence, and that the *animal* sugar thus *naturally* thrown into the circulation might be appropriated by the breasts either *per se* or after having undergone a slight transition. An analysis of the blood of a healthy nursing-woman, made for the purpose of determining this point, seemed to corroborate the view. The urine from the same person contained no sugar. Since reading my paper, I find that Fardel states that M. Blot has observed a physiological glycosuria during lactation, and among about one-half of pregnant women, and further, that this phenomenon is equally to be observed in the cow. He has simply, so far as I am aware, noted the coincidence, without accounting for the mellituria by a special reflex influence, and without assigning any use for the glucæmia. For what purpose does an increased amount of sugar in the blood occur during lactation, if not for the one I have specified? In confirmed diabetes sugar appears in several of the secretions; Bernard has

detected it in the saliva, Fletcher and Pavy in the perspiration. Nature appears so liberal in the production of sugar during lactation that the quantity unrequired by the breasts is eliminated by the kidneys as in morbid conditions.

Simon, several years ago, noticed that milk was richer in sugar during the earlier months of lactation than at later periods. This phenomenon may perhaps now thus be explained. The breasts, when beginning to assume activity, are in a condition to induce a sympathetic disturbance of the system, and more apt to excite increased hepatic sugar-formation by a reflex influence. When fully developed, they temporarily, to a certain extent, occupy the position of glandular organs, whose functions are permanent, and consequently their tendency to excite any special or general erethism is diminished.

Dr. W. C. Roberts, Vice-President, remarked: It is to be observed that diabetes mellitus is attended with an enormous quantity of sugar, amounting in some cases to one, or two, or even two and a half pounds in the twenty-four hours; a quantity far greater than exists in the urine naturally, or in the blood. The question of vital importance to the understanding of the phenomena of diabetes is, as to how this enormous quantity comes to get into the blood, and whence it is derived. Upon the knowledge of this, or satisfactory reply to the question depends our hope of ultimately attaining to a prevention and cure of the disease.

Aikin calls it a constitutional disease, obviously produced through error in the process of assimilation, either in the stomach, in solid organs, or in the blood. Now, if the term assimilation means, as I understand it, an absorption of the elements of the blood by the tissues during the capillary circulation, and a conversion of it into their own substance, I think the definition is erroneous. Sugar, although formed from the food in the process of digestion, does not, so far as I know, at least directly, contribute to nutrition; its use being, like those of other hydro-carbons, chiefly to maintain the heat of the body, which, however, is not solely attributable to this cause.

It is certain that all the sugar which in health is needed for the purposes of the economy, which is found in the blood, muscles, urine, etc., never sufficiently in excess to be easily recognizable, or to give rise to pathological phenomena, and easily disposed of in the lungs and by decomposition in the animal fluids, is derived from the starchy substances of the food and the juices of sweet-flavored fruits and vegetables. It was reserved for M. C. Bernard, of Paris, to throw the brightest light which has yet been shed upon the pathogenesis of diabetes mellitus. His experiments, and those of others, have shown that the animal organism has the power of forming sugar altogether irrespective of the nature of the food, and that sugar exists in a certain part of the circulation, namely, from the hepatic veins to the pulmonary capillaries. The sugar-producing organ is the liver. Moreover, it is the only organ in the body which, in the normal state, is found to be impregnated with sugar. Every other organ in the body may be destitute of sugar; but the liver always contains it in considerable quantites, provided the animal is healthy. The sugar which is found in the liver after death is a normal ingredient of the hepatic tissue. It is not found in other parts of the body, nor absorbed from the alimentary canal, but takes its origin in the tissue of the liver itself, produced, as a new formation, by a secreting process in the tissue of the organ. Thus the liver has a double secretory function—a biliogenic and a glycogenic one. The liver-sugar is not produced in the blood by a direct decomposition of the circulating fluid in the vessels of the organ, but takes its origin in the solid substance of hepatic tissue as a natural ingredient of its organic texture. Thence it is absorbed by the blood and transported by the circulation to other parts of the body. This production of sugar, says Bennett, is due to the transformation of another peculiar substance of anterior formation, also produced in the substance of the liver, called glycogene, which is transformed into sugar by means of a ferment existing in the blood.

The speaker referred minutely to the experiments of Drs.

Pavy, of Guy's Hospital, Dalton, Bernard, and Bennett, showing the formation of sugar, and said: Such are the leading facts which seem to be known in connection with the pathogensis of diabetes mellitus. There seems to be a direct connection between an irritation of a certain portion of the brain and diabetes, and there seems to be an indirect, or reflex one, which stimulate the liver to increased action; both of which tend to place this disease under the head of functional nervous disease, or diseases of disordered innervation, and to localize it in the nervous system, not as a disease however of the brain, for the floor of the fourth ventricle, though sometimes, is not always found diseased. What is the nature—what is the cause of this morbid action? Morbid anatomy throws no light upon this inquiry. There is no characteristic lesion. Cases occur which last for years, in which no evidence of cerebral irritation is discoverable during life, or on *post mortem* examination. The liver presents no constant appreciable lesion. The floor of the fourth ventricle has been found sometimes diseased and sometimes healthy. Tubercle of the lungs occurs, I believe, rather in the course of, than as a cause of diabetes mellitus.

If a constitutional disease be one which is developed under the influence of agencies generated *within* the body itself, and acting through continuous exercise of its functions, then glycosuria is one. If it depend upon cerebral or cerebro-spinal irritation, direct or reflex, then it is a neurosis. If under this influence, or in consequence of the presence of the sugar in the blood which it is called upon to excrete so profusely, the kidney be stimulated to increased action, the disease does not originate in the kidney, and is not a local disease in that organ. Neither, unless it occurs solely from direct local irritation of the liver, which it never does, so far as I know, is it a local disease of that organ. It depends chiefly, at least, upon increased glycogenesis in the liver, under the influence, in part at least, of what the French call a "vice d'innovation," a perversion or disorder of nervous influence, what we cannot say: for there seems no reason why it should sometimes suddenly attack, without appreci-

able cause, persons in apparently good health and unexposed to morbid influences, except such as do not ordinarily produce it. That the stomach is never wholly in fault is certain; for although Watson says it may cease to perform its accustomed chemistry upon the food, and upon sugar as an article of food, and secrete from the starchy, and even the nitrogenous elements of the food, a surplus of saccharine matter, yet it cannot be said to originate in, or be wholly confined to the stomach; and this morbid secretion, like the increased glycogenesis of the liver, must have a starting point elsewhere. Abstinence from starchy and saccharine food, while it does lessen, does not wholly remove the sugar from the urine; nor is it well tolerated, nor absolutely indispensable. I suppose it may be said safely that a mere perversion of the gastric nutrition, or assimilation function, is a sufficient cause of melituria; and I suppose that the same may be said, while admitting its influence as a combined cause with that of the stomach, of the imperfect performance of the *functions of the lungs*, primary or secondary. That it is ever a sole cause, I do not believe. That by failing to decompose an excess of sugar in the blood, it may aggravate, or perhaps even assist in stimulating, by a reflex action, the glycogenic secretion of the liver, is both possible and probable.

Dr. Roberts spoke of the two kinds of blood diseases, viz., those in which the poison is absorbed from without, as in glanders and syphilis, or in the typhoid and exanthematous fevers, and those in which the poisonous agent is generated intra-corporeally, as in glycohæmia and uræmia.

Glycosuria is to all intents and purposes a disorder of the nervous system; but of what kind, and how developed or superinduced, is unkown.

There would seem to be, in some at least, a predispositon to the disease, which makes common causes of disease to take this particular direction. It is a very rare disease. Many medical men, of long practical experience, may go through life without meeting with it; and of 80,000 certificates of death within a few past years, so laboriously examined by my painstaking

friend, Dr. Gouverneur M. Smith, 58 only were from this cause. Nevertheless something, nay much, has already been attained. The quantity of sugar supplied to the blood can be lessened by appropriate diet and regimen, and by Trousseau and Roberts it is affirmed that we may hope to cure a few, and to relieve a large number. The attempt to cure diabetes by confining the patient to a non-saccharine-producing diet, although it may be useful in an early stage, fails, because it does not affect the starting point of the disease, and, addressed wholly to the stomach, it but slightly modifies or interferes with the glycogenic function, or changes the morbid action of that part of the liver.

Dr. J. C. Peters. It is surprising that diabetes is so rare a disease, for Bence Jones and Professor Brucke have demonstrated that healthy urine always contains a small, but appreciable amount of sugar; *i. e.*, the amount of sugar derived from food, or from the changes going on in the liver and textures, is at all times more than can be destroyed in the circulation, in the lungs, and in the tissues.

The ingestion and manufacture of sugar in the system is always very great; for every grain of starch that is taken as food is converted into sugar. Pytalin alone will convert 2,000 times its own weight of starch into sugar; fresh pancreatic juice transforms four times its weight; the mucus of the stomach, and the strongly alkaline intestinal juice will do the same. Then we have the great amyloid or glycogenic function of the liver, by which the hepatic cells separate from the blood a substance called glycogen, or *animal starch*, which rapidly becomes transformed into glucose, or grape-sugar.

All this vast amount of sugar must be oxidized or destroyed in the circulation, in the respiratory process, and in the tissues, and should pass out of the body as carbonic acid and water. The only aid in this process is that afforded by the bile, which slowly converts cane-sugar into lactic acid, and by a healthy and vigorous state of the vaso-motor nervous system. For deblility of the sympathetic nervous system causes dilatation and paralysis of the small arteries of the liver and abdominal system

generally, followed by a larger flow of blood through the portal system and liver, and more rapid and copious formation of glycogen. This explanation applies to irritation of the fourth ventricle, division of the sympathetic nerves in the neck, irritation of the cerebro-spinal axis from the cerebral peduncles down to the roots of the pneumogastric nerves, etc., etc.; for all these operations and others cause paralysis of the vaso-motor nerves, and congestion of the liver.

The indications for treatment are the free use of oxygen gas; of those remedies that promote the oxidation of sugar, of which iron and the alkalies are the most energetic; and those remedies which promote the healthy secretion of bile, and depress the glycogenic function of the liver.

Among the *alkaline* mineral waters, the most useful are Vichy, more particularly from the Celestin spring, containing ninety-six grains of alkali; the Carlsbad water, with one-fourth less alkali than Vichy, but with half a drachm more of sulphate of soda in each quart, thus having an aperient action which Vichy rarely possesses. The *carbonate of soda* has been used successfully by Professor Alonzo Clark; the *bromide of potassium* by Dr. Bigbie; lime-water by Kepel, Willis, Fothergill, Watt, Frank, and others; *magnesia*, by Eberlee, Willis, Hufeland, and Phillips; the *phosphate of soda* by Latham and Starkey, while Prout considers it an admirable saline purgative; the *permanganate of potash* by Sampson, Basham, and Bence Jones.

But it has been noticed that the alkalies are particularly useful when diabetes is associated with obesity, while they are useless or injurious in debilitated, emaciated, pale, and nervous subjects. In these latter the best alkali is the *carbonate of ammonia*, which has been found so useful by Barlow, Golding Bird, and Bouchardat; and it may have to be associated with iron, in the form of the *ammonio-citrate*, with an excess of ammonia. Prout thinks that the citrate of ammonia is the best diaphoretic we can employ.

But in emaciated, debilitated, and anæmic patients the preparations of iron are the best remedies. The *iodide of iron* is

a remedy of great promise, but its use should be persevered in for a long time; the *peroxide of iron* is praised by Prout; the *phosphate of iron* by Venables and Prout.

Next to iron, the best tonic is *nux vomica*, which may be aided by astringents—such as alum, creosote, kino, opium, nitric and phosphoric acids.

The best bilious remedies are *rhubarb*, which has been found so useful by Copland, Boglin, Lester, Brocklesby, Morton, Buckwald, and Harris; *sulphur*, which has been advised by many German physicians, and by Copland; *ox-gall* by Hufeland and Copland; *aloes* by Copland.

Among the palliatives, opium is the most useful, but its debilitating effects should be obviated by nux vomica, iron, etc.

Every conceivable remedy has been tried in vain; but in this connection I will mention that in the case of the wife of a physician in this city, who passed eighteen ounces of sugar and three gallons of urine daily, much advantage has been gained, and strength and embonpoint restored by the use of arsenicum albi, one-tenth of a grain three times a day, which Legroux thinks he also derived benefit from. In cases of failure of pulmonary energy, the use of oxygen by inhalation, now getting into common use, suggests itself, and has been recommended by Richardson of London, and Berenger and Feraud in France. So, too, it may be with the use of cod-liver oil and roasted fats, so grateful to the poor patient of whom Dr. Smith told us, who, in his delirious dreams, looked forward with rapture to the delicious repasts the angels in Heaven were preparing for him. These, as fuel for combustion in the lungs, may tend to modify or improve their inefficient or diminished action, and lessen by so much the quantity of sugar in the blood.

These thoughts are crude and immature, but I hope they may stimulate to further discussion, which, I hope, may not cease until our learned President shall have expressed his views on this obscure but interesting subject.

The President, in summing up, thought that the ground gone over in the discussion was not altogether profitless, although the

pathogenesis of the disease could not be altogether explained. He had used the citrate of soda, three drachms in twenty-four hours for three weeks, and at the end of that time the sugar had disappeared. Those articles which act on the nervous system seemed to be demanded in this affection.

NOTE.---It is remarkable that in this exhaustive discussion no one has mentioned Lehmann's important discovery, that the percentage of sugar in the blood of diabetic patients is exceedingly small; proving thus the utter untenability of the common assumption, that glycosuria is but the result of a sugar-loaded blood (glucæmia), and that this condition of blood is due to a deficiency of sugar oxidation during the transit of this blood through the pulmonary circuit.

The treatment suggested in the debate of diminishing the amount of sugar in the blood by giving substances tending to increase the oxidation of this sugar, is based on utterly false premises; for in diabetic blood the amount of sugar is (Lehmann) exceedingly small.

No one has mentioned the beautiful experiments of Dupre (Lecturer on Chemistry at Westminster Hospital, London), which show that there is no want of oxidizing power displayed during the transit of the blood of diabetic patients through the pulmonary circuit; an additional subversion of the reasons urged in this debate for giving oxidizing agents.

No one has mentioned the fact that the amount of urea (tissue-waste) is much increased in diabetes mellitus, and that as the administration of sugar diminishes the amount of tissue-waste, sugar freely allowed checks the marked emaciation and the gradually increasing prostration so usually manifested in one suffering from diabetes mellitus.

Though this debate evinces on the part of the speakers a creditable familiarity with the complex literature of this subject, it is certainly remarkable that the valuable and practical facts mentioned in this note seem to have escaped the attention of the speakers.---ED.

ART. V.—SOLVENTS FOR CHOLESTERINE, ETC., ETC. By T. H. BUCKLER, M. D., of Baltimore, M D.

It is believed that chloroform (terchloride of formyl) and succinate of the peroxide of iron will be found superior to any other agents as solvents for cholesterine and cholesteric fat,

whether in or out of the living body. Chloroform taken into the stomach for the solution of gall-stones contained in the gall-bladder, and the continued use of succinate of iron to control the fatty or cholesteric diathesis and thereby prevent the formation of other calculi, have been invariably found by the writer trustworthy and successful after an experience of twenty years.

Turpentine and ether combined, as recommended by Durande, of Dijon, are the agents generally used as solvents of gall-stones. In regard to these remedies, we have only to say that a mass of cholesterine immersed in turpentine for three weeks had undergone no sensible loss of weight at the end of that time, and that however soluble this substance may be in ether, chloroform must always be found preferable, since it not only acts as the most rapid solvent, but at the same time produces the anæsthesia so necessary for the relief of the anguish invariably attendant on an acute attack of biliary colic.

In 1848 a mass of cholesterine of the size and shape of an ordinary-sized hen's egg was taken from the gall-bladder of a woman who died at the Baltimore Alms-house of some other affection. It was readily separated by gentle traction with the fingers into seventy-five irregularly quadrangular bodies about the size of an ordinary garden-pea when dried. These were subjected, in separate vials, to every agent deemed capable of exerting on them a solvent influence. The masses immersed in various acids, nitro-muriatic amongst others, had undergone no sensible loss of weight at the end of several weeks. Finally a mass, weighing several grains, immersed in Edinburgh chloroform, underwent solution in a few minutes, leaving only a friable refuse resembling the cinder of burned paper.

Not long afterwards we were consulted in the case of a married lady, aged thirty-eight, the mother of five children. She was stout and strong, and had always enjoyed good health up to the time of the attack, which was ushered in by paroxysms of pain in the right hypochondriac region, amounting at times to positive anguish. On examination an irregular indurated

tumor was felt through the walls of the abdomen, directly over the inferior margin of the liver. For some days this case was believed to be cancer of the liver; but as the paroxysms of pain were followed by jaundice, and the facies of the patient was not that of cancer, a conjecture was formed that the indurated tumour in question might be produced by a distended gall-bladder filled to a greater or less extent with biliary calculi and protruding beyond the inferior margin of the liver. A teaspoonful of chloroform was given by the stomach every hour while the pain lasted, and a teaspoonful only after each meal for a period of five days longer, when the indurated tumour, before described, entirely subsided, affording unmistakable evidence that the gall-stones, none of which were found in the stools, had been entirely dissolved out of the gall-bladder by the use of chloroform. About three months afterwards this lady, who had enjoyed good health in the interval, was again seized with a paroxysm of anguish in the righ hypochondriac region, owing evidently to a newly-formed gall-stone lodged in the trumpet-shaped mouth of the cystic duct. This being again dissolved by the use of chloroform, it was deemed desirable to administer some agent capable of controlling the cholesteric diathesis, and thereby prevent the further formation of biliary calculi. Seeing that the difficulty of dissolving gall-stones by any other agent than chloroform or ether grows out of the fact that cholesterine contains a very small amount of oxygen (from one and a half to two per cent., which is less than that of almost any other known substance), it seemed reasonable to suppose that a highly oxygenized compound would be found the best for attaining the object in view. Accordingly succinic acid and peroxide of iron were selected, on account of the large amount of oxygen contained in both of them. The hydrated succinate of the peroxide of iron was prepared by the eminent chemist Dr. David Stewart, of Baltimore. The lady, whose case we have just stated, made use of this salt as a permanent treatment to control the cholesteric diathesis, and thereby prevent the formation of gall-stones by destroying the raw material of which they

are composed. She continued to take it for a period of six months, and resumed it at intervals afterwards in the following dose: ℞.—Hydrated succinate of the peroxide of iron, ʒiss; water, fʒviss. M. S.—A teaspoonful after each meal. She has had no recurrence of the attacks since she commenced the use of this salt, and enjoys excellent health at the present time. Three other cases treated with chloroform were promptly relieved.

It is, above all other agents, the remedy for this disease, performing as it does the double work of a solvent and an anæsthetic. In all of these cases the succinate of iron was used as a permanent treatment after the chloroform had done its work. One other case terminated fatally, in which, in consultation, this treatment was advised, but not carried out. The patient, a young and lovely married woman, Mrs. Z. P., residing at Sassafras, Eastern Shore of Maryland, aged twenty-one, was taken to a neighboring city to consult two deservedly eminent medical gentlemen, who told her she was much too young and full of health to have biliary calculi; and one of them gave her *Budd on Diseases of the Liver* to read as proof of the correctness of their opinion. They told her husband the previous attack was hysterical, and advised that she should live generously, and go to the opera each night by way of amusement. She did go to the opera each night, and ate a supper on returning to her hotel. The night of the last supper she was seized, shortly after going to bed, with a pain in the right side, and continued in great anguish until ten o'clock the following morning, when she died. A *post-mortem* examination disclosed a gall-stone about the size and shape of a common Alpine strawberry, which her husband sent me.

After what has been demonstrated by H. Bence Jones and others in reference to the permeability of tissues, there is every reason to believe that a sufficient quantity of chloroform would pass into the gall-bladder through the intervening parts alone to dissolve out gall-stones, provided its use were continued a sufficient length of time; but when we reflect that chloroform is

taken directly from the stomach into the current of the circulation, and that a large portion of it is carried directly to the acini of the liver, where, mingling with the newly-formed bile, it passes with it into the gall-bladder, it is easily seen that gall-stones may be dissolved with as much certainty as if they had been placed in a bath of chloroform outside of the living body.

The use of succinate of iron may also be extended with advantage to the treatment of leuco-phlegmatic subjects in whom there is a tendency to a redundance of fatty tissue, and when there is reason to suspect that a deposit of the great disorganizer, cholesteric fat, may be forming about the heart and arteries, or in other structures. The popular idea is, that a man must be very well because he is very fat, when directly the reverse is often the case, adipose deposit being so frequently a form of structural degeneration of the tissues. It may be useful to persons having a tendency to obesity, and save them the necessity of carrying out the too rigid and often injurious Banting system of diet.

The writer is not aware that this salt has ever been prepared by any one but Dr. Stewart and his brother, J. V. D. Stewart, of Baltimore, and it is perhaps important to state that it should be prepared in the hydrous state and kept constantly in a water-bath, for if dried it will never afterwards undergo a proper solution in water, but always form a gritty mixture.

This paper is only intended as a small contribution to the present knowledge of the subject, for the benefit of many better informed than the writer on this and all kindred topics, with the hope that they will communicate the results of their trials to the editor of the "American Journal of the Medical Sciences."

NOTE.---Can two or three drachms of chloroform added to thirty or forty quarts of blood render such blood a solvent of cholesterine, even if the blood be brought directly in contact with it, and not merely in juxtaposition with it?---ED.

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—ANALYSIS OF VARIOUS ARTICLES. Published in the "Medical Times and Gazette," the "British Medical Journal," and the "London Lancet," etc. (Original copies). By Professor JAMES M. HOLLOWAY, M. D.

Permanganate of Potash in Gonorrhœa and Gleet.—In the "Lancet," December, 1870, Dr. Thomas Warden records the history of cases of these two diseases cured speedily by injections of a solution of the permanganate of potash—five grains to the ounce of water. Afterwards he increased the quantity to fifteens grains to the ounce. In one case of gonorrhœa the patient was cured in two days. In about two weeks he contracted the disease again, and the same treatment was followed by a similar result.

Hypodermic Injections.—At a recent meeting of the Clinical Society of London, Dr. Handfield Jones contributed a paper upon this subject, which was freely discussed by many of the members. Allusion was made to the danger of syncope following the injection of morphia in cases where heart's action was enfeebled by morbid changes occurring in the muscular walls or in the valves. The danger of a direct introduction of the remedy into a vein was mentioned, and it was asserted by Mr. Carter that the late von Graefe regarded instantaneous action of the remedy employed as the test of the solution entering the vein, and he "was accustomed in such cases to withdraw the piston before removing the needle."

The united opinion of those present was in favor of this plan of medication, the only serious objection being the amount of pain that it caused, and the main precautions being the use of

a small dose at first and the avoidance of the introduction of air during the operation.

The writer would suggest other precautions to be observed: Be very careful always to have a clear solution. Solutions of morphia and atropine carried in the pocket, or when kept in even a dark, dry, close box, will in a very short time become filled with motes. Many of these will not be re-dissolved by heat, and the employment of acid is contra-indicated. He, therefore, habitually keeps on hand filtering paper, and makes it an invariable rule to filter the solution immediatly before using it. He prefers, for convenience of administration as well as to render the operation less painful, to use as concentrated a solution as can be prepared without acids.

Patients under his charge have invariably complained of annoying soreness of the muscles of the limb or part into which the fluid was injected; this soreness appearing usually twenty-hours afterwards, and continuing, in a number of cases, for six or seven days. In each case the application of tincture of arnica has proved serviceable.

The profession of Louisville have employed this method of medication very generally for three years, and thus far there has been but one death reported—a very feeble old man.

The simplest plan for preventing the introduction of air is as follows: After the solution has been pumped into the cylinder of the syringe, elevate the point of the needle so that the contained air-bubbles will present at the *needle-end* of the syringe, when, by carefully pressing or screwing in the piston, the air will all escape with the loss of an inconsiderable amount of the solution.

It is advisable, for accuracy and safety, to introduce into the syringe the exact quantity of the solution intended for use at one time, for it is oftentimes difficult to *see* the graduated lines upon the glass cylinder with sufficient clearness to determine the exact quantity being introduced.

The precaution will appear all the more necessary when it is borne in mind that the formula for the solution of atropine, in

common use in this city, is one-sixtieth of a grain of atropine to two minims of water, and the solution of morphine is one-fourth grain of morphine to five minims of water.

It is advisable to employ a syringe having a piston that is worked by the *screw*-motion.

Hydrate of Chloral in Delirium Tremens.—Mr. Lansdown, at the Bristol General Hospital, reports two cases of delirium tremens, following fractures of the lower extremity, treated successfully by this remedy.

The first case, a man aged forty-one years, took on the first day three drachms of chloral from 3 P. M. to 9 P. M.; the second case, a woman aged fifty-seven years, took three drachms in one hour, after having previously taken a half drachm on the same day.

At the St. Joseph's Infirmary, and also at the Louisville City Hospital, in this city, chloral has been given in doses equally as large as in the cases in the above city. But it is found, as a rule in those institutions as well as in private practice here, that smaller doses (twenty to thirty grains every half hour) act as well as much larger doses. The general opinion is, that very small doses given at long intervals are frequently followed by an increase of the delirium, or in cases of sleeplessness by increased vigilance and restlestness.

Oil of Copaiba in Ascites.—Dr. Sieveking reports another case of ascites successfully treated at St. Mary's Hospital by this remedy. The patient was forty-five years old, and the dropsy has been increasing for eight weeks. When the treatment was instituted the abdomen measured thirty-nine inches round the umbilicus. He was ordered to take ten minims each of oil copaiba and liquor potassæ in an ounce of camphor water three times a day. In thirty-two days he was discharged qute well.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—INTERESTING CASE OF LABOR, WITH ANOMALOUS SYMPTOMS AND UNUSUAL THERAPEUTIC RESULTS. By R. STUART, M. D., Zion, Ky.

On the ———, 1870, I was called to see a negro woman in labor with her ninth child. I arrived about 5 o'clock in the evening, and upon examination found the head of the fœtus engaged in the inferior strait. The scalp puffed and swollen, was protruding slightly through the labia.

Upon interrogating the patient, I learned that she had been walking about in the yard about two hours before, and had felt a slight pain in her bowels, upon which she returned to the house, and went to her bed. She has had no return of the pain since. She stated that the membranes had ruptured four days previously, and that a slight flow of blood had been observed from that time. After waiting some time and finding no appearance of uterine contractions, I commenced the administration of ergot (fl. ext.) in teaspoonful doses every half hour, and continued it until I had given an ounce; but without the least effect whatever, so far as I could judge. The bones of the cranium were very movable, and the head easily compressed. So by using traction on the scalp, on which I could get a very good purchase with one hand, and leverage with the fingers of the other hand upon the cranial bones, I succeeded with much difficulty in drawing the head through the outlet.

I supposed that it would be a very easy matter to extract the body, but was mistaken.

After the head came through it impinged so closely against the soft parts of the mother that I could not touch the shoulder with the point of my finger, nor could the head be made to

advance the fraction of an inch by using the utmost force compatible with the woman's safety. The patient now complained of great pain about the vulva, caused partly by the manipulations to which she had been subjected, and partly by the pressure of the head upon the external orifice, against which the chin and occiput were firmly wedged. The child had evidently been dead some time, and I resolved to decapitate it, hoping by that means to be able to reach a shoulder and deliver. With the aid of a small scalpel I succeeded, not without great trouble, in performing this task. So close was the head to the soft parts of the mother that I had to ask the assistance of her husband to draw down the head, while with one hand I used the knife, and with the other pressed up the labia and perineum for fear of wounding them.

After getting rid of the head the woman expressed great relief; said that she felt perfectly free from pain.

My hand was now introduced to search for a shoulder, but to my astonishment the rim of the os was as rigid as an iron ring, effectually barring the entrance of my hand. I could only touch the cervical vertebra where it had been severed. Chloroform was administered with no favorable impression upon the uterine rigidity. It being now past midnight, and both my patient and myself being much wearied, I gave her a full portion of morphia, had Dr. Lightfoot sent for, and adjourned further procedure until his arrival. Dr. Lightfoot arrived at 7 o'clock A. M. After subjecting the woman to the influence of chloroform I requested him to attempt delivery.

He introduced his hand, while with my two hands upon the sides of the uterus I brought it nearer within his reach. He made repeated and persistent efforts, first with one hand to overcome the spasm of the os and grasp the child, but with all his patience and admirable skill was unable to accomplish it. His trials extended over the space of about an hour.

He then requested me to attempt extraction, while he, with his two hands, made downward pressure upon the uterus. With a good deal of force and patient effort, I at length succeeded in

insinuating my hand sufficiently to get a firm grasp upon the vertebral column, which I drew down with all the strength at my command. Then I took another hold by digging my fingers into the soft, pulpy tissues of the neck, and drew it still further down. At last I hooked my finger in the axilla, and while Dr. Lightfoot made firm pressure on the walls of the uterus, by most painful effort drew the headless trunk into the world. The stench was indescribable; the body was a mass of putrefaction. The woman made a good and rapid recovery, and is now in excellent health.

The interest of this case, to my mind, consists in the remarkable absence of uterine pains, and the utter failure of ergot to induce uterine contractions. She had one pain, and one only, and that a slight one. The ergot may have brought about that spastic rigidity of the os, which, subsequently, was the greatest obstacle we had to encounter.

ART. II.—REPORT OF AN ANOMALOUS AND INTERESTING CASE OF CEREBRAL TROUBLE. By C. KEARNS, M. D., Covington, Ky.

Mrs. Sophia Sutton was born in Kentucky in 1838; married in 1857; has since given birth to four children. At the age of fourteen years recollects having a severe headache, which lasted several days; these pains in the head occurring at long intervals; not being confined to any part of the head until 1860, when it was located over the left eye, and continued three weeks; one or two slight attacks located as before until 1863, when another attack occurred, if possible, more violent, lasting again three weeks; in 1865, another lasting ten days; continuing after this at short intervals, with less severity, until the spring of 1869. During these last attacks, feeling great tenderness over the left eye upon pressure. In June, 1869, a

small lump, the size of a shot, could be distinctly felt. After the appearance of which, the pains in the head and over the left eye ceased entirely. This lump or enlargement continued to increase to the size of a walnut. Her physician thinking it an encysted tumor, such as are frequently found about the head and face, attempted its removal. After making an incision the patient became frightened, and the wound was closed, nothing being removed but clotted blood. Four months afterwards, the wound from the incision not healing kindly, a druggest was consulted, who applied vigorously, for two or three months, acids, caustics, etc., without any apparent benefit. In June, 1870, one year after the appearance of the small lump, I was consulted by Mrs. Sutton. Over the left eye, upon the site of tumor, I found a thick crust or scab, from beneath which, upon pressure, a thin watery fluid escaped. After chloroform, assisted by Dr. Jessup, I removed the crust, and found the frontal bone about one inch above the orbital arch perforated about one inch and a quarter in diameter. A cheesey mass protruding, which I removed to the extent of a saucerful; hæmorrhage being profuse, I plugged the opening with a sponge, afterwards removing it and the clot that had formed. I could introduce my index finger full length directly backwards, having its extremity touch the lesser wing of sphenoid bone. Two months after the operation the depth of the cavity was two and a quarter inches; diameter, two inches. She has never had a pain or any difficulty of any kind since the operation, attending to her duties as mother and housekeeper as usual, never having a function of any kind disturbed. Upon examination of the cavity to-day, I find it filled about half. Dr. Dawson saw the patient an hour after the operation. Drs. Dawson and Carson two months afterwards.

NOTE.—The valuable clinical lectures of Jaccoud are for this month interrupted to give room for reports of the annual meetings of State Medical Societies.—ED.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

Art. I.—Address before the State Medical Association of Mississippi by S. V. D. Hill, M. D., President.

Gentlemen of the Association,—I am happy to greet you on this interesting occasion, and welcome you in an organized capacity as the representatives of the medical profession in the State of Mississippi. Another year has passed since we last met, a year long to be remembered and lamented in the annals of medicine for the rich harvest of noble spirits in our ranks that it yielded to the sickle of the Great Destroyer. Simpson, Syme, De Graef, Nelaton, Meigs, Dudley, Bedford, Jackson, Pope, and Elliott, have been stricken down with their armor on, and are now sleeping in the cold embraces of the turf; but their deeds and memories still live, and will continue for long years to shed lustre and honor on the profession of their lives and the age in which they lived.

In meeting here to-day, gentlemen, I sincerely trust that we have come together with increased zeal and renewed energies in the cause of medicine, determined to use every exertion to make our organization a perfect success. In a political and social point of view, it is true, we have but little to encourage us. The bitter animosities, general demoralization, and sensuality engendered by the late war between the States are not giving way to kindlier feelings, higher moral tone, and individual reforms as we would like to see them. But our people are gradually becoming accustomed to the new relation between the races, notwithstanding the occasional collisions; our financial resources are at least adequate to our support; confidence in the general government is slowly increasing, and the indications are favorable to our early dethronement of the dominant party

in our own State, when, better councils prevailing, I hope that we will again be comparatively happy, contented, prosperous, and free.

Certainly, with even one bright tinge to the dark clouds of our political horizon, and in this our third annual reunion of an infant Association, struggling for existence, it is a proper time to renew our vows to the cause of medicine, to wake up from our Rip-Van-Winkle sleep, and take a livelier interest in the onward march of science. We of Mississippi have too long been inactive and indifferent to the cause of medical organization and progress. In fact, during an existence of over fifty years we have done hardly anything in a collective capacity to give character to our State and honor and benefit to the profession. It is not because we have not the talent and learning in our ranks of which other States can boast; for quite a number of the medical men of Mississippi have, as individual physicians, become distinguished for their research and writings. But we have not availed ourselves of those organized efforts which bring us together in social and scientific converse, and develop the hidden talent of the land, arouse zeal and enthusiasm, and excite that spirit of emulation and investigation which we find in other communities, and which is so necessary to great results.

It is needless, before an intelligent audience like this, to enter into minute details respecting the precise aims, objects, and benefits of an Association like ours; for we are all familiar with them. But there are some influences connected with it, paramount in importance, which should be mentioned and impressed. I allude more especially to the elevating and purifying effect it has, or should have, upon the profession, separating us from the common herd of irregulars and quacks, and establishing a standard of medical honor and respectability. None should be members of this Association except those of acknowledged character, good professional standing, and who adhere strictly to the code of ethics under all circumstances and at all times; never failing to maintain the dignity and real nobility

of our beneficent calling. We wish membership here to carry with it weight and influence into any country and community. I hope, too, that we will have some success in correcting that spirit of indifference, carelessness, and want of professional zeal that exists to a deplorable extent among many of us in this State, and in many parts of the South. How often do we hear physicians remark that they are tired of their professions, take no pleasure in it, and would not practice another day could they subsist at anything else; others are absorbed by some connecting pursuit; but the most of them complain of deficient remuneration, unrequited labor, etc.; and thus we have a small army of growling, grumbling, croaking doctors, who take no journals, read few books, attend no medical society, and who are really almost prostituting their profession to a level with the common trades of life. These things ought not so to be. Medicine, it is true, like every other avocation of men, has its shades and shadows, its difficulties and sacrifices; but they were known to us when we commenced its study, and we should not give way to repinings now. I freely confess that the late disastrous war and its results have seriously affected our profits, and practice is not so inviting in this country as it was; but what interests have not been injured by the same causes, and who has not suffered? Doctors not more than others, I am sure.

But I wish to impress upon you the importance of our cultivating a deeper interest in our profession, and to estimate it above the common employment of life. We should soar beyond mere financial considerations and temporal emoluments. Life is too short and sacred to be tampered with by those who, losing sight of the higher attributes of the medical profession, estimate it alone from the standpoints of financial and selfish considerations. Thus, as an important element in securing the benefits and advantages of our annual reunions, it behooves us to inculcate a livelier and deeper devotion to the cause we plead, and endeavor to inspire the same spirit into our associates at home.

The present status and condition of the American Medical Association should not be lost sight of in considering those questions which bear upon the importance of State organizations and of medical improvement in its widest sense. In days gone by this institution was looked upon by southern physicians with pride and pleasure as an embodiment of the professional wisdom and dignity of the nation. Its able discussions, ethical decisions, and volumes of scientific papers, were interesting, instructive, and authoritative; but now it seems to have degenerated into a kind of politico-sectional debating club, where men ventilate pet schemes, grind their own axes, and subserve the interests of parties, cliques, and combinations, to the shameful neglect of the weighty matters of science. Personalities, and even obscenity, held high carnival at its last meeting. The insulting thrust at southern physicians by a member from Massachusetts is too indecent for repetition before a respectable assembly. Its author should be ruthlessly hurled from the ranks of the profession, in condemnation and disgrace, "to live out an immortality of degradation." How unfortunate, indeed, that for the sake of the Association and himself, if nothing else, he did not spare them from the denunciations of the civilized world, as Sidney Smith would say, "by a few brilliant flashes of silence." I do not propose that we withdraw our countenance and support from the American Medical Association; but I do say, that because of several features in its late proceedings, it behooves us to look well to our State organizations; for the day may come when honor and respect for ourselves will require complete separation from it. It is my earnest hope, however, that in future wisdom, dignity, and good feeling will take the place of folly, levity, and scandal; and that we may yet be proud of our National Assembly.

Many speak disparagingly of medical organizations among those remote from large cities and hospitals, believing that they must always remain mere followers in the onward march of science. But to become successful even in carrying out and executing the improvements and advances made by those more

favorably situated, it is certainly advantageous and important to meet together, discuss results of practice, and compare different experiences in the novelties, modifications, and changes of the day. We secure the combined views of our professional brethren upon many great questions that are agitating the scientific world, and which are so perplexing to individuals in numerous instances, and difficult to decide rightly upon. But the past history of our country shows clearly that much may be done by town and country practitioners in the way of positive progress in developing and perfecting the healing art. We can do more than we are disposed to believe, if we only try. The operation of which McDowell, of Kentucky, is the author, was a grand conception, and a bold, brilliant, and successful execution, establishing for all time a means of relief which is annually saving hundreds of lives heretofore considered beyond the reach of human skill. See what Sims, late of South Carolina, has done and is doing. His name stands high up on the roll of fame, and will be remembered and honored so long as medicine is known and respected. Read, of Georgia, Norwood, of South Carolina, and a host of others, might be mentioned for their great labors in behalf of science and humanity, none of which have had any better facilities for research and investigation than we of Mississippi. It is energy, application, determination, zeal, and a lofty conception of our duty to the cause and to posterity, which we need in order to become more useful and honored in our day, and be remembered when we are dead.

There are several things which claim our special attention that I shall take the liberty of adverting to: First, in regard to a volume of transactions. At our last meeting quite a number of interesting and instructive papers were presented, but could not be published for want of funds. I earnestly advise that an assessment be made for the purpose of publishing in a durable form our proceedings, and all papers deemed worthy by the proper committee. Without this we cannot expect to derive that permanent benefit from our labors that is expected, and which is so desirable.

I also think that the time has come when Mississippi should consider the question of educating her medical students at home. I do not design to elaborate this subject, but merely make the suggestion for your consideration. Our law, literary, and theological students receive their education at home; and why not the medical? Our State University would be more complete with a medical department on the plan of the University of Virginia, located in the growing and highly cultivated city of Vicksburg. Ours is one of the only three southern States that have no medical school, while several much younger than she have built up prospering institutions. Would it not be well for the Association to appoint a committee to memorialize the Legislature upon this subject? I leave it for you to decide.

I would also recommend that one physician from each county or congressional district in this State be appointed to report upon the indigenous remedies of their respective localities, and upon the prevalent diseases, with special reference to climatic and topographical peculiarities. We owe it to history, to science, and to posterity, to have a record of these things, and it is our duty to discharge the debt. I have no doubt that if we exhibit a commendable spirit of enterprise and research in developing a more extended knowledge of the native medicinal agents of the State, that we could soon obtain legislative aid in building up a museum for the benefit of the Association and the profession of the State. This might be attached to the geological and mineralogical collection now being made under State auspices.

There is one other suggestion which I will make for your consideration; and that is the adoption by this body of a State fee-bill, adapted to city, town, and country practice; not demanding for it compulsory adherence, but desiring it to be for reference and authority in instances of disagreement and difficulty.

In conclusion, gentlemen, permit me to express the ardent nope that our meeting will be pleasant, harmonious, and instruct-

ive, and that we all may be fully imbued with the responsibility that rests upon us as physicians, and the importance of availing ourselves of every means of information and advancement in medical lore, that we may be prepared at all times to control every known resource of the profession, when our patients are hovering between life and death. It is truly a noble, and almost sacred calling; embracing, as it does, within its ample fold most of the higher elements found within the vast domain of science; and forcing us so often to contemplate and contrast the corporeal and temporal with the spiritual and eternal. We draw our agencies and appliances from every quarter of the boundless universe; the depths of the sea; the bowels of the earth; the tops of the mountains; the lonely valley; the smiling field, and the full-orbed king of day. Even the air we breathe, the fire we burn, and that subtle element electricity, are made subservient to our wants in alleviating human suffering and prolonging life.

The true science of medicine is broad, liberal, and catholic in its spirit, bearing, and influence; it is bound by no pathy, ism, or special claims; nor is it bolstered up by self-laudations, patents, and flaming advertisements, but with an honorable antiquity, an acknowledged utility, dignity, and respectability, and a bright and promising future, it moves on in the even tenor of its way.

Thus, with a just and correct conception of our true position before the world; with a high sense of duty, earnest and honest hearts, let us go on conquering and to conquer, trusting in Him who doeth all things well, that having fought our last fight, finished the end, and kept the faith, we may receive the welcome plaudit: "Well done thou good and faithful servant, enter thou into the joys of thy Father."

MEETING OF THE STATE MEDICAL ASSOCIATION OF MISSISSIPPI.

The fourth annual meeting of the Medical Association of the State of Mississippi was convened at Progress Hall April 3d. The following physicians were present:

S. V. D. Hill, President, Macon; J. D. McConnell, Secretary, Brownsville; J. W. M. Shattuck, Columbus; Jas. M. Lewis, Kosciusko; E. M. Alexander, Ripley; J. C. Fant, Noxubee county; J. D. Harrell, Clark county; W. M. Compton, Marshall county; Edward Lea, Holly Springs; J. S. Featherston, Macon; C. Y. Thompson, Noxubee county; Geo. E. Redwood, Meridian; A. H. Smith, do; A. J. Curtis, do; J. R. Kirkland, do; J. H. Gibbs, do; J. D. Kline, do; C. B. Galloway, Canton.

Deliberations were opened by an appropriate and earnest prayer by Rev. T. Whitfield.

Minutes of last meeting at Vicksburg, in April, 1870, read and approved. The President having delivered his annual address, the following resolution was offered by Dr. J. D. McConnell.

Resolved, That the thanks of this Association are due, and hereby tendered to the President, Dr. S. V. D. Hill, for his able, erudite, eloquent, comprehensive, logical, and appropriate address; and that the same be referred to the Committiee on Publication with the request that it be inserted in the "Richmond and Louisville Medical Journal."

Reports of committees being called, Dr. Compton, chairman of the Committe on Revaccination as a Preventive of *Variola,* begged leave to read a paper on hydrate of chloral, as he had not been able to prepare one on the subject assigned him. A very acceptable and lucid essay was read.

Dr. Shattuck, of Columbus, reported verbally his experience in vaccination from scabs, taken from revaccinated subjects.

Association adjourned to meet at 3 o'clock P. M.

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3 o'clock P. M., April 3.

Association met persuant to adjournment.

By Dr. Lea:

Resolved, That the recommendations contained in the President's address be submitted to a committee of three to report specially on such recommendations during this meeting. Committee on same, Drs. Compton, Galloway, and Gibbs. Dr. Edward Lea read a report of glaucoma, characterized by very

peculiar symptoms and complications much improved by an operation. On this report an interesting discussion arose.

By Dr. Compton:

Resolved, That a committee of three be appointed by the President to confer with the committees of the Legislature on Humane and Benevolent Institutions, and urge the establishment of an eye infirmary in connection with an institute for the blind.

Committee: Drs. Alexander, Harrington and Lea.

By Dr. Lea:

Resolved, That Dr. Compton be requested to receive, classify, and preserve in a museum form, all anatomical and pathological specimens that may be forwarded to him, and dispose of the same according to instructions from this Association; and that the members of this Association, and all physicians in the State, be requested to forward to him any specimens they may have or procure deemed valuable. Each specimen to be accompanied with its history.

The President reported verbally a couple of cases of syphilis affecting the nerve centres.

Dr. Compton, similar cases producing mania. Also a case of mania from tubercles in the brain or its membranes.

By Dr. Shattuck:

Resolved, That a committee of three be appointed to select subjects for special reports at the next annual meeting of this Association. Committee, Drs. Shattuck, Fant, and Galloway.

On motion of Dr. Galloway, the Association adjourned till to-morrow morning at 9 o'clock.

MERIDIAN, April 4, 1871.

Met at Progress Hall, 9 o'clock A. M. The President, Dr. Hill, in the chair.

The following additional delagates were enrolled:

J. M. Taylor, Corinth; R. A. Quinn, Vicksburg; J. R. Barnett, do; J. C. Spinks, Kemper county; M. F. Wakefield, Starkville; A. A. Lyon, Columbus; Lee Shackleford, Meridian; W. D. Bragg, Garlandsville.

The above arrived since yesterday.

Dr. Compton, chairman of Committee on President's Address, read a report on same. Adopted.

Dr. Shattuck, from Committee to Select Subjects for Special Report at the next Annual Meeting of the Association, reported the following:

The name of the chairman of committee, on each subject is added:

The Committee on Selection of Medical Topics, respectfully report the following:

Treatment of chronic intermittents; Dr. M. F. Wakefield.

Conservative surgery; Dr. A. A. Lyon.

Carbolic acid as a remedial agent; Dr. John S. Featherston.

New remedies; Dr. J. R. Barnett.

Hypodermic medication. Dr. J. W. M. Shattuck.

Dysmenorrhœa; Dr. John D. McConnell.

Chloroform in obstetrics; Dr. C. B. Galloway.

Chronic constipation; Dr. J. M. Taylor.

The efficacy of treating chronic ulcers by skin-grafting; Dr. R. A. Quinn.

New or improved surgical instruments; Dr. J. H. Gibbs.

Treatment of pneumonia; Dr. J. M. Lewis.

The connection between malaria and trechina; Dr. Edward Lea.

On improvements in the management of insane hospitals; Dr. Wm. M. Compton.

An essay from Dr. E. H. Anderson, of Madison county, was read by Dr. Kline, on malarial fevers and their periodicity; referred to Committee on Publication.

On motion of Dr. Compton, the President (Dr. Hill) was appointed to prepare a paper on malarial hæmaturia to be read at the next meeting.

By Dr. Barnett:

Resolved, That the druggists, pharmaceutists, and chemists of the State of Mississippi be requested to call a convention at an early day and organize a State Pharmaceutical Association, to meet annually at the same time and place that the Medical

Association of the State does, and co-operate with it in any and all measures of mutual interest and importance.

By Dr. Smith:

Resolved, That a committee of one be appointed to correspond with the physicians of each county, requesting from them a report of all diseases in their locality during the year, together with all important cases that may come to their knowledge, and that from these he make a condensed report, to be read at the next annual meeting; Dr. Smith chairman.

By Dr. Quinn:

Whereas, Owing to the non-existence of a medical journal in this State, and the existence of local societies, and much valuable information being contained in the monthly reports by members of said societies of peculiar and interesting cases met with in their practice, the presence of an undeveloped field of therapeutical remedies pertaining to the Flora of this State, the knowledge of which in application and effect to numerous diseases peculiar to our southern climate, would enable us more effectually to combat with those diseases. Therefore, be it

Resolved, That in view of the foregoing fact, we deem it necessary and advisable to establish a medical journal, to be known as the "Mississippi State Medical Journal."

Resolved, That we urge the secretaries of all local societies and members of the profession throughout the State generally, to lend us their hearty co-operation both in sending reports of the proceedings of these Societies, and by original communications, to aid us in establishing this journal upon a firm basis, that it may not live by the scissors alone, as has been charged to many journals in this country by our Trans-Atlantic brethren, but that it may be a mouth-piece, a general medium of communication for all interesting subjects pertaining to the medical profession throughout the State.

By Dr. Barnett:

That a committee of one or more be appointed by the President to memorialize the Government of the State, urging the re-establishment of the Vaccine Bureau, and that a vaccine agent be appointed, who shall be required to keep constantly on hand a supply of reliable and pure vaccine virus, subject to the demand of any physician free of cost, and to any individual at a determined price. Carried.

Dr. Barnett, chairman.

By Dr. Featherston:

Resolved, That the thanks of this Association are due and are hereby tendered to Colonel J. J. Shannon for his courtesy and kindness in furnishing his paper to the members of the Association, and for publishing the proceedings.

By Dr. Taylor:

Resolved, That a committee of three be appointed to revise the constitution. Committee; Lyon, Redwood, and Shattuck.

Adjourned to meet at 3 o'clock.

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3 o'clock P. M.

The following appointments were made:

Delegates to National Medical Association, E. F. Whitehead, W. T. Bulfour, Vicksburg; J. R. Barnett, do.; J. H. Gibbs, Meridian; E. S. Lea, Holly Springs; W. M. Compton, Jackson; J. W. M. Shattuck, Columbus; C. B. Galloway, Canton; J. D. McConnell, Brownsville.

COMMITTEE ON PUBLICATION.

J. H. Gibbs, Meridian; A. H. Smith, do.; John D. Kline do.

Committee on memorializing the Legislature in relation to securing physicians' fees.

W. M. Compton, Jackson; E. M. Alexander, Ripley; E. L. Carter, Jackson.

COMMITTEE ON NOMINATIONS.

Dr. Kirkland, Dr. Thompson, Dr. Lea, Dr. Wakefield, Dr. Lewis.

By Dr. Taylor:

Whereas, The physical, moral, and civil condition of the human family depend to a great extent on the circumstances connected with the three important eras of existence, viz., birth, marriage, and death, and

Whereas, The great benefits desirable from a thorough and systematic registration can be fully appreciated in their primary aspects by but few outside of the medical profession;

Resolved, That it is expedient for this Society, representing the profession of the State of Mississippi, to recommend and urge the State Government to adopt and enforce a systematic registration of births and deaths in addition to the marriage records now kept.

Resolved, That a standing committee be appointed by this Association to take general charge of the subject and report annually to the Association.

Resolved, That this Association will furnish the State Government with suitable forms and nomenclature to be used in registration whenever the latter can be induced to enact proper registration laws.

Dr. J. R. Barnett, committee.

By Dr. Barnett:

Resolved, That the thanks of this Association are due and hereby tendered to the Medical Faculty of Meridian for their hospitable and courteous reception and entertainment of its members. Also, our thanks are tendered to the several railroads which have liberally passed members of the Association at half the ordinary fair.

The following officers were elected for the ensuing year; Dr. Wm. M. Compton, President; Dr. C. B. Galloway, Frst Vice-president; Dr. A. H. Smith, Second Vice-president; Dr. Ed. Lea, Third Vice-president; Dr. J. M. Taylor, Fourth Vice-president; Dr. J. W. M. Shattuck, Recording Secretary; Dr. J. M. Lewis Corresponding Secretary; Dr. R. A. Quinn, Treasurer.

By Dr. Compton:

Resolved, That the thanks of this Association are due Dr. Hill for the dignified and impartial manner in which he has presided over its deliberations, and to Dr. McConnell for his efficient performance of the duties of secretary.

On motion, the subject of a State medical journal was referred to Drs. Barnett and Hicks.

Resolved, That the Association meet on the first Wednesday in April, 1872, at Holly Springs.

ANNUAL SESSION OF THE TENNESSEE MEDICAL SOCIETY.

The Tennessee Medical Society commenced its thirty-eighth annual session, at Pulaski, Tuesday, April 4th, and was called to order by Vice-president Joseph M. Towler, of Columbia, who, upon assuming the chair, announced the death of the President, Dr. J. E. Manlove.

MEMBERS PRESENT.

The following members were present: Dr. Joseph M. Towler, of Maury county; Drs. J. H. Wilkes, J. B. Lindsley, Paul F. Eve, W. L. Nichol, J. D. Plunket, of Davidson county; Dr. R. N. Herbert, of Williamson; Drs. B. P. Clark, D. W. C. Gordon, C. C. Abernethy, M. P. Harwood, of Giles county.

ADMISSION OF MEMBERS.

The following gentlemen were unanimously elected members of the Society: Drs. J. A. Sumpter, R. Roberts, Wm. Batte, A. H. White, M. S. Waters, J. C. Roberts, B. F. Smith, J. E. Fry, J. H. Keeling, J. T. Steel, of Giles county; T. J. Edwards, of Obion county; J. R. Edwards, of Lawrence county; W. C. Dorset, and T. B. Rains, of Maury county.

FINANCIAL.

Dr. Plunket, the efficient Secretary and Treasurer, presented his annual report of receipts and expeditures, showing a balance on hand.

RETIRED FROM THE PROFESSION.

A letter was read from the Corresponding Secretary, Dr. D. DuPre, of Nashville, announcing his retirement from the profession. The Doctor has turned landlord, and, we are confident, will prove as assiduous in his attentions to his guests as he has been to his patients.

ELECTION OF OFFICERS.

The following members were elected officers for the ensuing year: Dr. Paul F. Eve, of Nashville, President; Dr. Wm. Batte, of Pulaski, Vice-president for Middle Tennessee; Dr. Frank Ramsey, of Knoxville, Vice-president for East Tennessee; Dr. B. W. Avent, of Memphis, Vice-president for West Tennessee; Dr. J. D. Plunket, of Nashville, Secretary and Treasurer; Dr. C. C. Abernethy, of Pulaski, Corresponding Secretary.

Dr. Eve, the President-elect, was conducted to the chair by Drs. Batte and Lindsley. In resigning the chair, Vice-president Towler congratulated the Society upon its selection of Dr. Eve as its President, whom he characterized (and justly, too) as a

very "Nestor" in his profession. President Eve thanked the Society for the honor conferred upon him in a brief, but feeling manner.

HOSPITALITIES OF THE TOWN.

Drs. Roberts and Sumpter, the Reception Committee, having met the arriving members at the depot and distributed them among the hospitable citizens of the town, extended an invitation to the Society to attend a hop at Cox's Hall the next evening.

CEREBRO-SPINAL MENINGITIS.

Essays being in order, Dr. T. D. Deavenport, of Giles county, read a paper on cerebro-spinal meningitis, which was listened to with profound attention, and elicited considerable discussion.

CASES IN POINT.

Dr. Towler detailed a case in his own practice. Of a family of ten negroes, eight died. Three or four went blind during the course of the disease. He had tried bromide of potash faithfully, but without avail. A neighboring negro woman, who was *enciente*, came over as a nurse, took the disease, and died.

Dr. Wilkes asked Dr. Towler whether he considered it an inflammatory disease.

Dr. Towler was undecided; sometimes he had thought so, sometimes not.

DELINQUENT MEMBERS.

Drs. J. J. Abernethy and J. W. Richardson, of Rutherford; S. M. Thompson, of Bedford; J. H. Callender and C. K. Winston, of Davidson, not being present to read the papers assigned them, were given until the next session to prepare their essays.

HISTORY OF THE SOCIETY.

Dr. J. E. Manlove, appointed two sessions ago to write a history of the Society, having died, Dr. J. Lindsley was appointed in his stead.

BLOODLETTING.

Dr. C. C. Abernethy read an interesting paper advocating the use of the lancet. Discussion was postponed until the next day, when Dr. R. G. P. White was to read a paper on the same subject.

AMPUTATION OF THE HIP-JOINT.

Vice-president Batte here took the chair, and Dr. Eve read an able article on the amputation of the hip-joint, which was worthy of its distinguished author, whose reputation as a surgeon is national.

Adjourned until 9 A. M., Wednesday.

WEDNESDAY'S PROCEEDINGS.

Drs. W. T. Briggs, of Nashville; S. R. Gooch, Maury, and D. K. Higden, of Giles, who were absent Tuesday, arrived.

President Eve having been called away, Vice-president Batte was in the chair.

BLOODLETTING AGAIN.

Dr. R. G. P. White read an interesting paper in favor of bloodletting.

A lengthy discussion ensued, the majority of those who spoke favoring the judicious use of the lancet.

HISTORY OF TENNESSEE SURGERY.

Dr. Briggs was called upon for his "History of Surgery in Tennessee," and stated that he had been sending circulars throughout the State, and was receiving replies. He asked for the appointment of assistants, one from East and one from West Tennessee. The Society authorized him to select such assistants at his leisure.

THANKS AND OTHERWISE.

Dr. Lindsley, chairman of the Business Committee, reported the following resolutions, which were adopted:

Resolved, That a standing committee of three be appointed to report upon the adulteration and preservation of drugs.

Resolved, That the thanks of this Society are hereby returned to the citizens of Pulaski for the hospitality so fully extended to our members during their stay here, as well as for the complete arrangements made for its sessions.

Resolved, That our thanks be returned to the Nashville and Decatur, Nashville and Northwestern, Nashville and Chattanooga, Edgefield and Kentucky, and Tennessee and Pacific rail-

roads, for their liberality in returning the members free of charge, and that we regret that similar courtesy was refused us by the wealthy Louisville and Nashville road.

INTERESTING SURGICAL CASES.

Drs. C. C. Abernethy and Roberts introduced several patients, presenting cases of an interesting surgical nature.

COMPOUND COMMINUTED FRACTURE.

A paper from Dr. D. DuPre, of Nashville, was read, detailing his treatment of a case of compound comminuted fracture of both bones of the leg.

A DAY-OLD MEMBER EXPELLED.

Dr. C. C. Abernethy read a dispatch from Union City, stating that the physicians of that place "refused to indorse Dr. T. J. Edwards as a regular physician." This and other facts ascertained subsequent to his admission, on the previous day, led to a reconsideration of the vote by which the Society had elected him a member, and he was, therefore, formally expelled from the Society.

Dr. J. C. Roberts read a paper on "Bone Formation and Regeneration."

ILLEGITIMATE PRESCRIPTIONS BY IGNORANT DRUGGISTS.

The following preamble and resolution were unanimously adopted:

Whereas, Many druggists throughout the State, who are physicians neither by education nor profession, are in the habit of prescribing for a certain class of cases, of the pathology of which they are necessarily ignorant, thus depriving the physicians of business legitimately their own; now, therefore,

Resolved, By the members of this Society, that we will, in the future, patronize only such druggists as confine their operations to a strictly legitimate business; and we earnestly recommend a similar determination to all the profession throughout the State.

PUTTING THE SCREWS ON.

Dr. B. P. Clark moved that the following delinquents be fined $10 for dereliction of duty assigned them: Drs. J. H.

Callender, J. W. Madden, C. K. Winston of Davidson, Thomas M. Lipscomb, and S. M. Thompson of Bedford, B. W. Avent of Shelby, and Matt. M. Alexander of Knox. Unanimously agreed to.

INCIPIENT ELEPHANTIASIS.

Dr. J. C. Roberts introduced a patient (a boy twelve years old) suffering from incipient elephantiasis.

STANDING COMMITTEES.

The appointment of the standing committees was left for the subsequent action of the President.

ADJOURNMENT.

The Society then adjourned to meet at Nashville April 4, 1872.

THE SOUTH CAROLINA MEDICAL ASSOCIATION.

The twenty-first annual meeting, and third meeting since the re-organization of the Association, was held April 5th, at Charleston, at 12 M., Dr. R. A. Kinloch, Second Vice-President, in the chair.

The following officers were present: Dr. R. A. Kinloch, Second Vice-president; Dr. J. S. Buist, Recording Secretary; Dr. F. P. Porcher, Corresponding Secretary; Dr. F. L. Parker, Treasurer.

The President *pro tem.*, in taking the chair, regretted the absence of the President, Dr. T. T. Robertson, of Fairfield, from sickness, and paid a tribute to the memory of Dr. S. Fair, First Vice-president.

The Minutes of the last meeting of the Association, held in Columbia, were read and confirmed.

The President appointed the following Committee on Credentials: Drs. J. T. Darby, Richland; F. P. Porcher, Charleston, S. Baruch, Camden.

A recess of five minutes was taken to allow the committe to report.

The committee reported the following delegates and permanent members present:

Anderson.—Drs. W. H. Martin, L. L. Sharpe, E. M. Brown, R. F. Dwier.

Charleston.—Drs. J. F. M. Geddings, E. E. Jenkins, T. G. Simons, S. L. Lockwood, F. P. Porcher, R. A. Kinloch, W. F. Robertson, F. L. Parker, F. M. Robertson, J. L. Ancrum, M. Michell, J. W. Angel, J. S. Buist, M. Greenland, R. Lebby, Jr., Joseph Yates, T. S. Thomson, G. E. Trescott, E. H. Kellers.

Kershaw.—Dr. S. Baruch.

Marion.—Dr. D. S. Price.

Orangeburg.—Dr. C. S. Darby.

Richland.—Drs. J. T. Darby, R. W. Gibbes, and A. N. Talley.

A quorum being present, the Association was declared ready to proceed to business. Dr. F. L. Parker proposed the name of C. U. Sheppard, Jr., as a permanent member, and moved that the constitutional rule be suspended for the purpose of electing a physician a member of this Association who is not a member of a county Society.

On motion, the rules were suspended, and Dr. Shepard was unanimously elected.

Dr. F. M. Robertson proposed the name of Dr. E. E. Jenkins, who was unanimously elected.

The Secretary presented the Association copies of the "New York Medical Journal," and other papers sent for distribution to the Society. The thanks of the Association were returned to the publishers.

The resignation of Dr. W. C. Horlbeck was accepted.

The report of the Committee on Publication and Ethics was read and accepted.

The report of the Treasurer was read and accepted, and ordered to be published. Association took a recess until 5 P. M.

Afternoon Session.

The Association assembled at 5 o'clock, P. M.—Dr. R. A. Kinloch in the chair.

The Committee on Accounts made their report, which was received.

On motion, the privileges of the floor were extended to Professor Charles U. Shepard, Jr., Dr. R. L. Brodie, of Alabama; Dr. Parker of North Carolina, and H. W. Warner, of South Carolina.

An invitation to visit the City Hospital was accepted by the Association.

Dr. F. P. Porcher read a paper entitled "A Statement of a Few General Propositions in Medicine and Axioms, with regard to practice, and on the Utility and Inutility of Medicine." A considerable discussion ensued after the reading of this paper, which elicited remarks from many of the members. The paper was referred to the Committee on Publication.

A paper was read from Dr. Walter Hill, of Edgefield, reporting a case operated on by Cæsarian Section, in which both mother and child were saved. The paper was referred to the Committee on Publication.

The Association adjourned until 11 o'clock to-morrow.

Morning Session.

The Association assembled April 6th, at 11 A. M., the officers and members being present as before, with the addition of the following delegates and members: Drs. J. E. Holbrook, E. Geddings, J. P. Chazal, and W. M. Fitch, Charleston; W. F. C. Bates, Orangeburg.

Journal of previous day's proceedings was read and confirmed.

The Secretary read a letter from Dr. James, of Indian Town, regretting his inability to attend the present meeting.

Dr. F. L. Parker read an interesting paper upon "Dislocation of the Wrist-Joint."

On motion of Dr. F. M. Robertson, the paper was referred to the Commmittee on Publication.

The Secretary introduced Mr. Venonie, of the State of Georgia, who presented to the Association a new style of medical and

surgical chain. Mr. Venonie explained the uses to which it could be applied. The thanks of the Association were returned to Mr. Venonie.

Dr. Trescot read a paper on the "Value and Study of Therapeutics," which, upon motion of Dr. Darby, was referred to the Committee on Publication.

The special order for 1 o'clock being the report of the special committee appointed to draft a memorial and resolution in regard to Dr. S. Fair, of Columbia, deceased, was taken up. The committee asked for further time, and the privilege of publishing it in the proceedings of the Association.

Dr. F. M. Robertson read a paper on a case of "Placenta Prævia," followed by observations on some recent opinions published on this interesting subject.

The President appointed the following committee on nomination of officers for the ensuing year: Drs. John T. Darby, of Columbia; W. H. Norden, of Anderson; S. Baruch, of Kershaw; S. Price, of Marion; C. S. Darby, of Orangeburg; F. M. Robertson, of Charleston. The committee were directed to report at 5 P. M. in the afternoon.

The Association then took a recess until 5 P. M.

Afternoon Session.

The Association was called to order by the President *pro. tem.*, Dr. R. A. Kinloch.

Dr. F. M. Robertson presented to the Association a copy of "The Transactions of the Medical Society of the State of New York," as presented by the late Dr. Alden Marsh, of Albany, New York, when the following resolution was unanimously adopted:

Resolved, That the volume of "The Transactions of the State Medical Society of New York," presented to the South Carolina Medical Association by the late Dr. Alden Marsh, of Albany, New York, be accepted with thanks; and that the Secretary be directed to forward a copy of the transactions of this Association to the State Medical Society of New York.

Dr. F. M. Geddings read a paper upon "Uræmic Poisoning." On motion, the paper was referred to Committee on Publication.

Dr. M. Michell read abstracts of a paper on operations for cataract, with a detailed list of cases, which was discussed at length; and upon motion, was referred to the Committee on Publication.

Dr. R. W. Gibbes exhibited specimens of gall-stones of large size, and the description of the cases in which they occurred. The Doctor was requested to write the report in full, and present it for publication.

Dr. T. Grange Simons was, on motion, unanimously elected a permanent member.

The Committee on Nominations reported the following-named officers, who were unanimously elected: Dr. F. Peyre Porcher, Charleston, President; Dr. R. W. Gibbes, Columbia, First Vice-president; Dr. A. P. Wylie, Chester, Second Vice-president; Dr. D. S. Price, Marion, Third Vice-president; Dr. T. Grange Simons, Charleston, Recording Secretary vice Dr. J. S. Buist, declined re-election; Dr. S. Baruch, Camden, Corresponding Secretary vice Dr. F. P. Porcher, elected President; Dr. F. L. Parker, Charleston, Treasurer.

The following gentlemen were appointed delegates to the American Medical Association to be held at San Francisco, Cal., in 1871: J. T. Darby, Columbia—alternate, B. W. Taylor, Columbia: F. M. Robertson, Charleston—alternate, J. S. Buist, Charleston; W. H. Norden, Anderson—alternate, R. C. Carlisle, Newberry; J. McIntosh, Newberry—alternate, L. M. Ayer, Barnwell; G. E. Trescot, Charleston—alternate, T. S. Thompson, Charleston; T. P. McNeil, Edisto—alternate, W. T. C. Bates, Orangeburg.

The President, in taking the chair, returned his thanks for the honor conferred.

The thanks of the Association were returned to the Second Vice-president, Dr. R. A. Kinloch, and the retiring Secretaries, Drs. Buist and Porcher, for the able manner in which they had discharged their duties.

After the transaction of important business, and returning thanks to the various railroads, the Association adjourned *sine die*, to meet in Columbia on the third Tuesday in April, 1872, at 11 o'clock.

SIXTEENTH ANNUAL MEETING OF THE KENTUCKY STATE MEDICAL SOCIETY.

FIRST DAY, MORNING SESSION.

COVINGTON, KY., April 4, 1871.

The Kentucky State Medical Society meeting (in the Baptist Church, on Madison street,) was called to order by the President, Dr. W. A. Atchison, the session being opened with prayer by Rev. J. M. Worral.

The following members were present:

Drs. McKee, Dunlop, Harlan, and Jackson, of Danville; Drs. Logan and Craig, of Stanford; Drs. C. Rogers, D. W. Yandell, and Gaillard, of Louisville: Drs. Chipley, Todd, Smith, Bryant, Dillard, Stevens, and Foster, of Lexington; Dr. Mann, of Nicholasville; Drs. John T. Wise, T. N. Wise, Henderson, Pretlow, and Drury, of Covington; Drs. Shaler and R. W. Thornton, of Newport; Drs. Bradford of Augusta, Beeler of Clinton, McCoy of Columbus, J W. Thompson of Paducah, Dougherty of Scott county, and Spillman of Harrodsburg.

After the report of the Committee on Arrangements and a speech of welcome by Rev. Dr. Worral, the Committee on Credentials was appointed, consisting of Drs. Beeler of Clinton, Dunlop of Boyle county, Hale of Daviess county, Gaillard of Jefferson county, and Henderson of Covington.

On motion of Dr. Kearns, of Covington, it was

Resolved, That the Kentucky State Medical Society appoint a committee to invite the State Medical Society of Ohio (now in session at Cincinnati) to take part in our proceedings.

Committee appointed, consisting of Drs. Kearns, Todd, and Yandell.

The Committee on Credentials then reported favorably on the admission to membership of the following gentlemen:

Drs. D. H. Jessup of Covington, R. H. Thornton of Newport, J. M. Keller, D. S. Reynolds, and W. O. Roberts of Louisville, R. W. Taylor of Hawesville, H. C. Hart of Winchester, A. A. Slaughter of Milburn, S. P. McCoy of Columbus, W. R. O'Neall of Verona, F. H. Noonan of Covington, P. B. McGoodwing of Princeton, and C. H. Klarenaar of Covington.

The reports of the special committees then being the order of the day, they were called for.

On Effects of Alcohol in the Human System (Dr. D. N. Porter), no report.

On Mineral Waters of the State (Dr. L. J. Frazee), no report.

On New Remedies (Dr. E. R. Palmer), no report.

On Hypodermic Medication (Dr. W. B. Rodman), no report.

On Registration (Dr. S. P. Breckinridge), no report.

A motion was then made to continue the session until 3 P. M., and then adjourn until to-morrow morning. Motion lost.

A motion to adjourn until 3 P. M. was then carried.

Evening Session.

Tuesday, April 4, 1871.

Arrivals since morning session—D. N. Porter, D. D. Carter, W. B. Rodman, J. W. Holland, and R. A. Gibney.

The Minutes of the morning were read and adopted.

A delegation from the Ohio State Medical Society, composed of Drs. Wright, Stevens, Woodward, Dunlop, and Kinkead, in behalf of their Society, invited the members of the Kentucky State Medical Society to participate in the meeting of their Society, now in session at Cincinnati; the members were also tendered the hospitalities of the Ohio Society at a banquet to be given at 9 P. M. at "Hopkins's Hall," Cincinnati.

On motion, the thanks of the Kentucky State Medical Society were returned to the Ohio State Medical Society for their polite invitation.

Report on Gynæcology read by George Syng Bryant, of Lexington, and referred to Committee on Publication.

The Committee on Credentials having reported favorably on the names of Drs. J. N. Long of Newport, J. J. Temple of Covington, and H. F. Barnes, of Louisville, they were elected members of this Society.

Report on Pathology (Dr. E. S. Gaillard), no report.

Report on Sphygmograph. Dr. L. P. Yandell asks time to finish his report and refer to Committee on Publication.

Report on Dermatology (Dr. A. G. Drury) continued.

Report on Cholagogues (Dr. M. E. Poynter), no report.

Report on Can the Idiot be Taught (Dr. E. H. Black), no report.

Report on Trachoma (Dr. Hale) read and referred to Committee on Publication.

Report of Secretary and Treasurer made and referred to Committee on Finance (Dr. D. N. Carter chairman).

President's Address read and referred to Committee on Publication.

Moved by Dr. Gaillard, and carried, that Drs. Porter, Spillman, and Wise, be appointed a committee to consider the best means for carrying out the recommendations in the President's Address.

Dr. Porter moved that Dr. Gaillard be added to this committee, and be made chairman of it.

Moved by Dr. Gaillard, that the voluntary papers offered to the Society be referred to Committee on Publication without reading. Carried.

President appointed Committee on Nominations, as follows: Drs. Spillman of Harrodsburg, Craig of Stanford, McKee of Danville, Keller of Louisville, Taylor of Hawesville, Beeler of Clinton, Thompson of McCracken, Drury, of Covington, Mann of Nicholasville, Chipley of Lexington, Carter of Versailles, Porter of Henry county, Rodman of Frankfort.

An invitation having been received from the Trustees and Staff of the Cincinnati Hospital to visit that institution at 11 o'clock to-morrow, it was resolved that the thanks of the So-

ciety be tendered the Trustees and Staff, and the invitation be accepted.

It was moved, and carried, that the Society adjourn to meet at 9 A. M., Wednesday.

MORNING SESSION.

WEDNESDAY, April 5, 1871.

The Society assembled at 9:30 A. M.; and after the reading and adoption of the Minutes, the Committee on Nominations made their report, which was adopted by the Society.

For President, T. N. Wise, Covington; Senior Vice-President, J. Hale, Owensboro'; Junior Vice-President, Coleman Rogers, Louisville; Recording Secretary, W. B. Rodman, Frankfort; Corresponding Secretary, A. G. Drury, Covington; Treasurer, L. B. Todd, Lexington; Librarian, R. W. Taylor, Hawesville.

COMMITTEE ON PUBLICATION.

Drs. S. P. Breckinridge, J. M. Keller, and E. S. Gaillard, Louisville.

It was moved, and carried, that J. K. Bigelow, a delegate from the State Medical Society of Indiana, be invited to a seat on the stand with the officers.

Drs. J. A. Larrabee and J. H. Blair having been reported by the Committee on Credentials, were elected members of this Society.

The Committees on Hypodermic Medication, Vital Statistics, and Botany, were discharged.

The Committee on Epidemics was continued.

Report of Committee on Hygiene referred to Committee on Publication.

An invitation from the physicians of Louisville to the Society to hold their next annual meeting in that city being received, was accepted.

A motion having been carried yesterday referring voluntary papers, without reading, to the Committee on Publication, it was resolved that the reconsideration of that motion be made the special order on reassembling this evening.

It was moved, and adopted, that three (3) delegates from this Society be appointed to attend the State Medical Societies of Ohio, Indiana, Illinois, and Tennessee.

Motion to adjourn until 3 P. M. was then carried.

EVENING SESSION.

WEDNESDAY, April 5, 1871.

Motion to reconsider the adoption of the resolution referring voluntary papers, without reading, to Committee on Publication, was carried.

Dr. Chipley then moved to lay the whole matter on the table. Carried.

Dr. Joseph Smith, of Lexington, by consent of Dr. Keller, of Louisville, offered the following resolution, which, if carried, should be made a by-law of this Society.

Resolved, That any member of this Society who has been or shall be expelled, by any local Society in connection with the State Medical Society, for any violation of the code of medical ethics, shall be suspended from membership in this Society until an appeal is takan, or a reversal of decision by said local Society.

Under the rule must lie over and be read the second day.

Dr. Keller calling for the ayes and noes, the following gentlemen voted in the affirmative: Drs. George W. Thornton, Chipley, Ditzler, Spillman, Keller, Conery, C. Rogers, Hale, Atchison, Gaillard, Temple, Newland, Bryant, Logan, D. W. Yandell, D. N. Porter, Smith, Dunlop, Dougherty, Major, Klarenaar, Blair, Robert Thornton, Henderson, Beeler, Mann, Slaughter, McCoy, Pretlow, John T. Wise, Reynolds, Larrabee, Hart, Noonan, Roberts, Boyd, Jackson, W. B. Rodman, T. N. Wise, and Mckee. Noes—None.

Dr. Keller moved a reconsideration of the morning's decision to meet next year in Louisville. Carried.

Dr. Newland urged Hopkinsville; and his motion was seconded by Dr. Keller. Lost.

Dr. Beeler named Paducah as the place of meeting. Lost.

Dr. Temple moved the previous resolution, making Louisville the place of next meeting. Carried.

Dr. Porter moved that Dr. F. Major, of Hamilton, Ohio, and Dr. P. W. Dryden, of Jeffersonville, Ind., be elected honorary members of this Society. Referred to Committee on Credentials.

Drs. J. M. Chambers, of Independence, and Henry M. Dowell, of Cynthiana, being reported by Committee on Credentials, were elected members of the Society.

It was then resolved to appoint delegates to the American Medical Association which meets at San Francisco on May 5th.

Dr. Keller then moved that only those who signified their intention of going be appointed as delegates. Carried.

Amendment by Dr. Gaillard empowering the President to appoint in the next two weeks was lost.

Dr. Keller moved that those nominating delegates should vouch that such delegates would go. Lost.

Nominations being now in order, Dr. Chipley nominated Drs. H. M. Skillman and James M. Bush, of Lexington; Dr. Spillman nominated Dr. John D. Jackson, of Danville; Dr. Dunlop nominated Dr. P. B. Goodwin, of Princeton; Dr. Atchison nominated Dr. T. N. Wise, of Covington; Dr. Yandell nominated Dr. Ditzler, of Rockfield; Dr. Jessup nominated Dr. W. W. Henderson, of Covington; Dr. Slaughter, nominated Dr. J. W. Thompson, of Paducah; Dr. Keller nominated Dr. Lewis Rogers, of Louisville; Dr. Yandell nominated Dr. Hale, of Owensboro'.

Dr. Atchison offered the following resolution:

Resolved, That the papers submitted at last annual meeting, and not published for want of funds, be referred to the present Committee on Publication. Adopted.

Dr. Gaillard, as chairman of Special Committee, made the following report, which was accepted:

The committee to whom was referred the Address of the retiring President have the honor to report as follows: That so much of the Address as has special reference to the organization of county medical societies be referred to the Secretary of this Society, with instructions to send short printed circulars to a few

prominent physicians in each county in the State, asking them in the name of the State Society to form county medical societies, and have delegates from these societies sent to the next meeting of the State Society at Louisville; the expenses necessary for the printing and distribution of the circulars to be paid by the Treasurer of the State Medical Society; that so much of the Address as refers to obtaining a proper registration law be referred to the chairman of the existing committe upon this subject, asking that increased efforts be made to secure the enactment of said law; that so much of the Address as refers to the obtaining of a law regulating the licensing of druggists and the efficient and safe dispensing of medicines be referred to a committee on this subject; and the undersigned would suggest the the names of Drs. Hugh Rodman and E. H. Black, of Frankfort, as a suitable committee for this purpose. All of which is respectfully submitted.

E. S. GAILLARD,
T. N. WISE,
C. H. SPILLMAN,
D. N. PORTER.

Dr. A. J. Beale being recommended by the Committee on Credentials, was elected a member of this Society.

Adjourned to meet at 9 A. M., Thursday.

MORNING SESSION.

THURSDAY, April 6, 1871.

The Society met at 9 A. M. The Minutes having been read, were adopted.

Dr. Porter moved that the resolution offered by Dr. Smith yesterday be now read and adopted as a by-law. Motion carried.

Dr. Jackson moved that the Secretary send to each new member a copy of the constitution and by-laws. Carried.

Dr. Porter moved that a committee be appointed to attend the Virginia State Medical Society. Adopted.

The following gentlemen were appointed as delegates to the

different State Medical Societies: Indiana, Drs. Hale, Porter, and Rogers; Ohio, Drs. Keller, Jackson, and Henderson; Tennessee, Drs. Atchison, Newland, Byrne; Illinois, Drs. Noonan, Thompson, and Brown; Virginia, Drs. Gaillard, Bryant, and Spillman.

Dr. Dunlop offered the following resolution:

Resolved, That the State Medical Society approve of the action of the American Medical Association in recommending a fee of five dollars for examinations for life insurance. Carried.

Moved by Dr. Jackson, that a committee of three be appointed to select a suitable device and motto for a seal for this Society, to be placed in the hands of the Secretary; and that said committee be empowered to draw upon the Treasurer for the payment of the engraving of the same. Carried.

Committee, Drs. Jackson, Gaillard, and Spillman.

The following additional nominations were made for delegates and the next annual meeting of the American Medical ion at San Francisco: Drs. Paul Rankin, of Georgetown, Porter, of Bowling Green.

n moved, that if the delegation to the American ociation be not filled during the session of this hose members of the Society who may hereafter President be appointed until the delegation is

ved that this Society recommend to the physihe State to secure a copy of the Code of Medinerican Medical Association. (For sale by o. 64 Walker street, New York.)

illman, Dr. Jackson read a paper on Medih was referred to the Committe on Pub-

, the thanks of this Society be tendered oats for their kindness; also, the pastor Madison-street Baptist Church for the ifice; also, the citizens and physicians of d attentions and liberal hospitality.

The President appointed the following committees for the ensuing year:

STANDING COMMITTEES.

On Arrangements, L. P. Yandell, Sr.; Vital Statistics, P. Logan; Obstetrics, W. H. Newman; Epidemics, S. P. Craig; Surgery, R. O. Cowling; Botany, Lewis Kastenbine; Finance, Joseph Smith; Ethics, D. N. Porter; Hygiene, J. D. Jackson.

SPECIAL COMMITTEES.

On Registration, S. P. Breckinridge; Resection of the Long Bones, J. W. Thompson; Defects in our Present System of Medical Instruction, and some Suggestions as to Remedying them, C. H. Spillman; Hypodermic Medication, W. W. Henderson; Ovariotomy, J. Taylor Bradford; New Remedies, Thomas Kyle; Clinical Thermometer, Coleman Rogers; Ophthalmoscope, D. G. Reynolds; General Pathology, E. S. Gaillard.

The Society then adjourned to meet in Louisville on the first Tuesday in April, 1872.

JOHN D. JACKSON, Recording Secretary.

W. A. ATCHISON, President.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

NEZ PERCEZ INDIAN AGENCY, IDAHO, 1871.

Dr. Gaillard:

Doctor,—It seems almost impossible that two years have elapsed since we parted in Louisville. As you and your readers may be interested in the life and observations of a physician among the Nez Percez Indians, I send you these lines.

That portion of our country bounded by the 44th and 47th parallels north latitude, and the 114th and 118th degrees west

longitude, has, for many years, been peopled by a tribe of Indians called Nez Percez, or Pierced Noses. A glance at the older maps will show that their country is situated in the range of mountains which skirts the western border of the continent, and familiar to us in our boyhood as the "Rocky Mountains."

More modern maps locate this country in Idaho Territory, and bounded, with greater exactness, by the great Plains of the Columbia river on the north and northwest, by the Bitter Root mountains on the east, the Salmon River mountains on the south, and the Blue mountains on the west.

Bursting through the Salmon River and Blue mountains on the south and east, the Snake river rushes in a direction nearly due north, through the heart of the Nez Percez country, channeling for itself in huge canons a roadway through the rugged country, until joined by the Clearwater river it takes a turn rather abruptly to the west, and empties itself finally into that Mississippi of the West, the great Columbia river. Tributary to the Snake river, and rising in the mountain ranges to the east and south, are the Salmon and Clearwater rivers, which, flowing generally in a westerly direction, with their respective tributaries (whose name is legion), cut the country into innumerable canons, gulches, valleys, and rendering travel through it, unless on made roads, both difficult and dangerous.

Although thus liberally supplied with rivers and smaller streams, the country is not well watered. Rushing with great velocity from their sources in the mountains above-mentioned, the streams have made their beds so far below the level of the country that no benefit whatever to the prairies, so called, is derived from them, and only the valleys, susceptible of irrigation, are of use for agricultural purposes; as if, however, to compensate for this apparent loss, the prairies, entirely destitute of trees, are clothed with an exceedingly rich grass, which, watered by the rains of the Fall and Spring, and the Winter snows, affords a pasturage and grazing country unsurpassed by any in the world; the grass differs somewhat from that familiar to us in the East, being round in stem, with a very narrow

blade, and growing in small bunches—say, of fifty or sixty blades each—and is known as "bunch grass"; it is very rich, and makes admirable forage for stock of all kinds; when ripe, it is from three to four feet high, and as hay, is quite smooth and soft, and much used by packers to stuff the apparajo or pack-saddle.

The soil in the valleys is a rich alluvial, susceptible of high cultivation, but owing to the temperature during the Summer months becomes very dry, and must be irrigated to be made available.

The country is of volcanic origin, with terraces of basaltic trap cropping out; huge blocks of this rock, oftentimes of fantastic shape, rear themselves along the water courses in many places, balanced on such apparently slender pedestals that it would appear as if a breath would rock them from their foundations, and send them thundering down the precipitous sides of the canon, into the stream below; patches of alkali of the soda variety are to be found dispersed at intervals over the face of the country, and in nearly all the streams gold in considerable quantities is to be obtained; some of the richest diggings along the upper Pacific coast are located in this country; at Warrens, Elk City, Oro Fino, and on the Salmon river, this precious metal, of very fine quality, is yielded to the industrious miner by washing on sand-bars and in the beds of creeks, or by working into the hills by means of powerful streams of water carried in "flumes" from the nearest water course; this latter method being known as "hydraulicing" among the miners.

In the mountains is to be found granite, limestone, and many precious stones, as rubies and garnets.

As before stated, the prairies are covered with bunch-grass; in the valleys a variety of wild rye grows in great abundance; along the water courses grow cottonwood, willow, and birch trees, sumach, wild cherry, wild hop, elder, hawthorn, and wild gooseberry, raspberry, and currant, while in the mountains are quantities of cedar, fir, and pine trees. On the prai-

ries in the southern section of the country a bulbous root, somewhat resembling our common onion, called by the Indians "camas," grows in great quantities, and is with them a favorite and almost indispensable article of diet. In the latter part of the Summer large numbers flock to the camas prairies, where the squaws dig and dry the roots preparatory for Winter use.

A country so sparsely settled as this, abounds of course in wild animals and game, although the influx of inhabitants, which of late years has been considerable, is thinning out the game. In the mountains are found the grizzly, black, and cinnamon bears, panther, grey and black wolf, moose, elk, deer, mountain goat, red and grey fox, and the lynx, while on the prairies and in the valleys the prairie wolf or coyote, wild cat, beaver, fisher, otter, and mink, are to be found.

Of birds, we have the eagle, falcon, hawk, crow, curlew, grouse, pheasant, prairie chicken, teal, mallard, widgeon, seed and other ducks, king-fishers, magpies, and a host of smaller birds too numerous to mention. The streams abound in trout of several varieties, and salmon. The sportsman is well rewarded in this country for a day's tramp, and in the season, if he be anything of a shot, may feel pretty sure of coming home with as much small game as he cares to carry.

How this tribe of Indians obtained its name is impossible to tell, but surely never was a tribe of Indians so grossly slandered; not one of them at this day pierces his nose, nor, so far as I am able to learn, was it ever their custom so to do; the only bodily mutilation to which they submit is piercing of the ears. The tribe numbers about 5,000 souls, and is accounted the wealthiest north of California.

In physique they are generally tall and well formed; their skin is a dark copper color, hair coarse, worn long, and very black, the cheek-bones and nose are very prominent, eyes small and black, and lips thin; they have no beard, their limbs are well formed, and it is extremely rare to see among them a deformed person. The women are rather under size, but well formed, and many of them exceedingly pretty when young,

although as they grow old their beauty fades, and almost invariably goes beyond the point of neutrality, and far into the bounds of hideous ugliness; an old squaw is a veritable "old hag," and would be worth a fortune to an ambitious artist as a model of a "fury."

From the earliest settlement of this coast to the present day the Nez Percez Indian has been a friend to the white man, and it is the boast of the tribe that "the blood of a white man has never been shed by them in war." Colonel Bonneville, who at an early date explored this country, speaks in the highest terms of their kindness to him, and although Lewis and Clarke had, in their expedition, trouble with some of the young men, they give *the tribe* credit for excellent behavior. During the Indian wars on this coast the Nez Percez have been our strong allies, and in the expedition of General Wright against the Spokan and Cœur d'Alene Indians, proved of signal service to him; they are given much credit for their behavior at the time of the ill-fated expedition of Colonel Steptoe, and, indeed, have always been ready and willing to aid the Government in its wars with the other Indians, and by their power and influence have undoubtedly prevented much blood-shed. They are not a warlike people, although brave and well skilled in the use of arms, such as they possessed, and in the constant war which rages between the Blackfeet Indians or Ishmaelites, of the North, as they are called, and all their neighbors, have acquitted themselves with much credit.

Of their language I hardly know what to say, or indeed what can be said of the language of any tribe of Indians; it consists in a series of sounds more or less guttural, anything but euphonious, and only to be understood after long practice and by close attention; as at least one-half of their ideas is conveyed by gestures, it is less difficult for a stranger to communicate with them than one would at first imagine, and it is truly astonishing how readily they comprehend one's meaning. I have practiced medicine among them now for nearly two years, and while I cannot speak a dozen words of their lan-

guage, rarely have the least difficulty when called to a patient to understand his story or to make him or his friends understand my directions.

The dwellings occupied by them are made during the Winter of buffalo or deer skins, and in the Summer of a matting made from the long reeds of rye-grass, which, as before stated, grows abundantly in the valleys; the squaws are very dexterous in weaving this matting, which effectually sheds water, and is so open and porous as to afford ample ventilation in the Summer. To support the covering of the "lodge" or "wigwam," (*house*, as they with great dignity call it), ten or twelve poles about twelve feet long are used; four of them are set up in such a manner as to meet about a foot or eighteen inches from the top, and support each other, while the others are brought into position between these four, forming thus a substantial framework, on which the covering is thrown; to the upper corner of the covering a pole, about four feet longer than its fellows, is fastened, and its projecting end answers the purpose of a sort of flagstaff, to which, if variety so incline, the deer-skin shield or saddle ornaments of the warrior inhabitant is suspended; by the aid of this pole the top of the wigwam can be tightly shut or widely opened, as occasion requires; the entrance is at the point of meeting of the sides of the covering. The blankets and buffalo skins, or bedding of the occupants, with horse equipments, and a general assortment of traps, are ranged around the inside of the wigwam, and in the centre is built the fire, which answers the double purpose of cooking and warming.

The clothing consists of a blanket or buffalo robe thrown over the shoulders (if a robe, the fur inside), and fastened about the neck by a string of deer skin, and about the waist by a belt of similar material; for breeches, a wide strip of blanket is wrapped about each leg, reaching from the hip to the ankle, and fastened along the outside by skin thongs, leaving a flap of blanket about six or eight inches wide, as an ornament, which may be fringed or not, to suit the fancy of the wearer; a clout is worn between the legs, and the feet are encased in moccasins

made principally from deer skin. Men and women dress generally alike, although as they become civilized the women wear a loose skirt or gown of flannel, which reaches a little below the knee.

Of personal adornments, after their particular style, they are exceedingly fond, and often display much skill in its accomplishment, considering the means possessed. First in the list of varieties stands *paint*, and I believe I may safely say that I have never yet seen an Indian, old or young, without more or less paint upon his portly person; the favorite color is vermilion red, which, by the addition of dirt, is often varied to a dark brown; first, the "part of the hair" receives a liberal dose of vermilion, and then the forehead and cheeks; among the very old and very young painting stops here; but the belles and beaux are more given to following a fashion; a heavy coating of black is smeared on the eyebrows, and across each cheek as far as the base of the ear a broad strip of brilliant yellow, and following the body of the lower jaw a streak of black; fancy the effect thus produced! In the disposition and color of paints there is, however, an endless variety, but the more thoroughly pronounced tints, and the greater the quantity of paint used, the prouder miss or master "Lo" becomes; the more sedate allege as a reason for this liberal use of paint the protection it affords against the sun's rays, and as these people never wear any covering for the head, this reason seems a good one.

Next to paint come beads and shells, the latter, if highly polished, being considered of great value, especially among the ladies, and are used solely as ear "drops," or hung about the neck; the bead-work of the squaws of this tribe is very poor when compared with that of the Indians of the Plains, and is confined to the ornamentation of moccasins, shields, tobacco pouches, etc.; small looking-glasses, brass rings, bracelets, and trinkets of all kinds that possess lustre or brilliancy of color are highly prized. The men are much given to adorning their hair with feathers, and if they can procure a hat, will cut off the crown and trim the rim to its utmost capacity with

feathers of various colors and kinds, and add a few little bells by way of extra effect. I should here say that none of the Indians on the Pacific coast wear the "scalp-lock," and never scalp their enemies; the hair is only cut a little above the eyebrows; elsewhere it is permitted to grow to its full length.

The most important property possessed by these Indians is their horses, and to keep them they will undergo almost any privation or hardship; occupying a country so admirably suited for grazing, it would seem natural that the Indian should turn his attention to stock raising, and yet it is an exceedingly rare thing to see one owning half a dozen head of cattle; the reason for this is a fear of war, either from neighboring Indians or the white man; for while they are so well disposed to the latter, it seems almost impossible to banish from their minds the idea that at some time or other war may come, and then unless their property is in horses it would fall an easy prey to the enemy; leading also a wandering life, here to-day, and to-morrow on a march of fifty or a hundred miles, any other stock than horses would be burdensome, and require too much care and labor to keep up. Unless in a most dire case of necessity, or to procure a much-coveted article, they will never sell these animals, and in consequence they accumulate into immense bands; it is not uncommon for one Indian to own from 200 to 300 horses, and still be so poor that, during the Winter season, he and his band will nearly starve to death. The Indian horses are called by white men "cayuses"; they are small in size, resembling much the Canadian pony; are very hardy and long-lived in spite of the severe usage they often get; in color they are nearly all pie-bald; they are very sure-footed, have good wind, and are quite fleet; although much despised by white people, cayuse horses in this country are invaluable to the explorer, hunter, or miner; accustomed to travel long distances without water, never groomed, and with a never-failing supply of food always ready, and thoroughly familiar with the country, they will travel in places and for distances that would kill an American horse; they have one vile trick, however, which, to the

stranger, will bring many a back and bone ache, and produce from him unlimited profanity if he is not prepared for it; that is "bucking"; if he takes the whim, one of these beasts will spring suddenly from the ground, and come down stiff-legged, communicating to the unwary rider a shock which is anything but pleasant, and which, if often repeated, will give him a most thorough shaking in spite of his horsemanship; unless the tyro is prepared to be nearly split in two, or "sun his moccasins," as the facetious miner terms a "throw," he had better keep off of a cayuse horse.

An Indian always mounts his horse from the *right* side, and guides him with a horse-hair rope passed in a loop about the lower jaw; bits and bridles are almost unknown among them; men and women ride in the same manner, and are unsurpassed by any people in the world for their skill in horsemanship; many times I have seen them dash down a rough, rugged hill, wheeling their animals in all directions, leaping from their backs at full speed, and indeed doing as many daring and fastastic tricks as any circus-rider; they are very skillful in using the lasso, which they will throw over the head of an animal at considerable distance from them, and at full speed.

It has been said that the Indian is the laziest human being to be found in our country, and while this may be true of the majority, the Indians of this tribe can be considered in a measure an exception, as many of them cultivate the ground quite extensively; it is true, their farming operations are done in a truly primitive style, but each year they are gaining knowledge on the subject from the white men, and becoming more and more proficient in the use of farming implements. At the present day, some member of each band devotes himself to superintending the farming operations for the benefit of the rest, and he succeeds remarkably well, considering the short time his attention has been drawn to this industry. Many are supplied by the Government with plows and a few other farm tools, and the soil being rich, they are not disheartened by too hard work in reaping its products; a little light plowing and

scattering of seed yields them a good crop of wheat, corn, or oats; and in the neighborhood of the settlements a few thrifty ones are to be found who raise melons and some vegetables, but they have not yet been sufficiently civilized to pay much attention to the seed after it is once planted, and on that account their crops are somewhat uncertain.

The labor is mainly done by squaws, although very many of the men work in the plowing season. Their method of separating the grain from the sheaf is simple; the stalks are cut with a common sheath-knife by the squaws, and piled in huge piles to be trampled out by horses, and afterwards winnowed by hands; they are an improvident race, and except in the matter of wheat and potatoes, and the camas root, never think of laying by a stock, either for themselves or for their animals for Winter use; in consequence should a severe Winter overtake them, they suffer very much for want of food, and lose large numbers of their animals by starvation.

Their government is of the patriarchal form, each head of a family being considered a chief, and regulating the movements and discipline of his band, enforcing the latter when occasion requires by his "strong right hand and mighty arm." Before they came under the protection of the Government there was no recognized chief of the tribe, and dissensions between the now called *sub*-chiefs were settled either by arbitration on the part of disinterested persons or by the argument of force.

Hunting and war parties are, however, always commanded by one who has especially distinguished himself in those arts, and to whom a name is given suggestive of his ability, as "Red Heart," the chief warrior, and "Eagle of the Light," the chief hunter.

They have no well-defined form of religion, and their ideas of a future state are based upon superstitious legends, which, by the way, make very interesting stories; they believe that in some way or other there is another life beyond this, but whether it is in a "happy hunting ground," presided over by a "Great Spirit," I have never been able to ascertain. Many of the tribe

have become Christians during the past few years through the labors of Presbyterian and Catholic missionaries, who have been living among them, and I believe their example has had a marked influence on the remainder, and that many will become converts.

The domestic ties are strong with them, and they are affectionate and kind to each other to an extent scarcely conceivable in a savage, the only exception to this rule being their treatment of the very aged, whom they often neglect; many a time I have been deeply moved at the extravagant grief of some poor mother over the loss of a child, who, like Rachel of old, refused to be comforted, notwithstanding all the sympathetic condolences of family and friends, and would pass days at the grave of her child, filling the air with her lamentations.

The marriage state is, as a general rule, kept with great care, and the punishment for incontinence is severely and rigidly administered; polygamy is strictly forbidden; the bride is purchased by her lover from the parents; no wedding ceremony is performed, and the contracting parties go off to their own lodge as soon as the consent of the parents has been obtained and the stipulated price paid.

About funerals they are more particular, and make them the occasion of a liberal feast, in which all the relatives and friends are expected to join; the feast is supposed to be given by the deceased party, and each guest must touch the corpse before eating. At the funeral of a child of one of the most influential sub-chiefs the feast consisted of an ox cut into strips and roasted before the fire; a barrel of flour manufactured into a kind of cracker, and baked in an earthen oven; a quantity of camas root, and some dried berries. Runners were sent out far and near to summon the young men of the tribe, a large number of whom responded promptly, and were present. After a "pow-wow" over the corpse, an old chief opened the ball by laying his hand upon the hand of the deceased, and then passing straight to the point at which the feast was prepared, and helping himself; his example being followed by all present, no

one presuming to neglect the formalities of the occasion.

The dead are buried by this tribe, graves being always dug on the points of the hills, and marked by a heap of stones; in this respect they differ from nearly all their neighbors, who elevate their dead on stagings of poles, or on high rocks. Until recently it was the custom to bury with the deceased his bow and arrows, and a little food, and to kill at his grave a few of his best horses, suspending them afterwards on poles over the grave, and to this day one need travel but a few miles to see the hides of horses swinging in the air, over the grave of some departed Indian.

As a rule these Indians are not very healthy, and it is not to be wondered at when one sees them indulging so frequently in their favorite sweat-bath. Within a few feet of a stream a hollow place, about eight feet in diameter and three feet deep, is scooped in the ground and lined with smooth stones; over this a hut of reeds is built, and a thick covering of mud put over that; an aperture only large enough to admit the body of a man, by tight squeezing, being left in the side nearest the stream.

When a bath is taken, a brisk fire is built on the stones in the hut, and when they are quite hot the fire is drawn out; four or five Indians then strip themselves and crawl inside the hut, where they remain until dripping with perspiration, when they come out and walk leisurely to the stream, into which they plunge and stay by the hour, with the water up to their chin; I have seen them taking this sweat-bath in the depth of Winter, when they had to break the ice to get at the water.

The principal diseases from which they suffer are scrofula, exanthems, phthisis pulmonalis, rheumatism, conjunctivitis; the infantile eruptive diseases are also quite prevalent among them. Venereal diseases are rare, and only found on the persons of those who frequent the settlements, and are in constant intercourse with white people; they are much neglected, however, owing to their ignorance of the subject, and they are not brought to the notice of the physician until well advanced; they are conse-

quently somewhat more stubborn in treatment than if taken in hand at an early stage. Chancres are apt to assume a phagædenic character, and the secondary and tertiary results are in some cases frightful; the mucus membrane of the urethra seems, however, less prone to violent inflammatory action than in the white man; gonorrhœal cases are exceedingly mild, and yield readily to treatment. I have never seen a case of stricture or gleet yet. Scrofula manifests itself principally in swellings and ulcerations of the cervical glandular system, and as in the case of chancre, from long neglect extensive destruction of tissue follows. I have now under my care a patient in whom I daily expect a hæmorrhage from the carotid from ulceration of all the tissues on the right side of the neck.

The most prevalent affection, however, is conjunctivitis, caused, I believe, from constant exposure to the smoke from green wood burned in their wigwams; it yields readily to douches of a weak solution of permanganate of potash, and so thoroughly are they impressed with the efficacy of this agent, that I am constantly besieged by them for bottles of the "red medicine water," as they call it; innumerable cases of pterygium, opacities of the cornea, cataract, etc., are to be met with, and a specialist might consider himself in the seventh heaven if he could get among them with his needles and knives; they are, however, exceedingly averse to any surgical procedures, and I have never yet been able to induce one of them to let me operate, even in the simplest of cases; when it is indispensably necessary to operate, they bear the pain with great fortitude, as I have several times witnessed in cases of minor surgery, not an evidence of pain being traceable even on the faces of young children.

For obstetricians they have no use; parturition seems to be attended with no bad results, nor indeed are the women subject to the manifold diseases of the sexual organs with which their more unfortunate white sisters are afflicted.

I have never had a case of difficult labor among them, and they are generally up and about on the second or third day after labor. The infant, or "pappoose" as it is called, is, directly

after birth, tightly swathed in skins, and fastened by a broad strip of skin to a board about three feet long and of oval shape—say, eighteen inches wide at the top and six at the bottom.

The pappoose thus imprisoned, is carried about on the back of the mother, the board being fastened to her by a broad strap passing over the shoulders, and another about the waist; when moving about on horseback, the pappoose board is swung to the pommel of the saddle by a stout thong of deer skin, and the poor little human goes bobbing about at every step of the horse, lulled to sleep, however, by this rough cradling, and apparently enjoying it as much as any child of the wealthiest white man would its most appoved sleeping-place.

In the treatment of the sick they use little or no medicines, and regarding disease as a demon or evil spirit, attempt its removal by exorcism, and the "medicine man" is a sort of wizard, who is supposed to have a certain amount of control over the evil spirits; when called to a sick person he produces a drum, made by stretching a skin tightly over some sticks, on which he immediately commences a most furious beating with enchanted bones, accompanying this music (?) with most hideous yelps and howls, whereby he hopes to drive away the evil spirit; of course his patient is more often harmed than benefited by such procedures; they have *faith*, however, and prefer their own treatment in very many cases to the more (to them) questionable course adopted by the white doctor.

In surgery the medicine men are quite expert, and I have seen results in several instances of their treatment of fractures and removal of tumors which would have done credit to the most skillful of our profession.

On two points they graciously yield to the white man supremacy in medicine—these are vaccination and the use of chloroform, or sleep medicine. Of small-pox they have a most wholesome dread, and hasten on its appearance in their country to the "Sy-kip-too-wat," or white doctor, to be vaccinated.

I fear this paper has already gone beyond the bounds of patience, but I will add a few words concerning the course of the

Government to them, and then a rest to your readers. Several treaties have been made with these people by agents of the Government, the main objects being to bring them on the lands reserved for their use; to educate them, and instruct them in the uses of agricultural implements. Upon the subject of these treaties, the tribe is divided into two nearly equal parties; the one in favor of, the other against them. The former profess a desire to become civilized; they have settled on the Reservation, and do more or less farming; send their children to the school established at the agency, on the Lapwai Creek, make attempts at learning our language, and take what in their eyes is the most important step toward civilization, viz., wearing the cast-off clothing of white men. Their chief is an old man named "Lawyer," a shrewd far-seeing Indian, endowed with a remarkable quantity of common sense, and who, when the white men first came into the Nez Percez country, was the foremost in advances to them; his counsels to them are good, and his example better; he is a strict Presbyterian, can read his Bible, cultivates a farm, sports a silver watch, and wears an old stove-pipe hat.

The non-treaty party are loath to give up the pleasures and pursuits of their forefathers; they consider almost any kind of manual labor degrading, and glory in the hunt and the chase; they are, in other words, the "chivalry" of the tribe, and on most all of their expeditions into the buffalo country manage to have a brush with their old enemies, the Blackfeet; as time, however, wears on, they begin to see the benefit of civilization, and appreciate the fact which has so often been brought before them by settlers and others, that "the white men are as numerous as the stars in the heavens," while their wandering life and barbarous habits must eventually give way to habits of industry and a system by which a support for themselves can be relied upon; they find the numbers of buffalo, deer, and game of all kinds, diminishing annually, and, moreover, observe that their more sensible brothers are well cared for by a powerful Government, and are certainly never pinched by hunger.

Every month or two a band comes to the agent, to give in their allegiance to the Great Father, and to ask for tobacco, and annuity, and goods. It is my belief that at no distant day it will be hard to find a *wild Indian* in this section of the country.

The Government has already improved two of the finest valleys in their country, the Lapwai and Cottonwood, by fencing them off into farms of twenty acres each; has built for them a steam saw and grist-mill, school house, and a few dwellings at a point near their favorite camas ground, as well as at the agency at the mouth of the Lapwai, and annually supplies them with tools, seed, tobacco, blankets, and a variety of other useful articles. A little coaxing and judicious treatment will, I am convinced, convert this tribe from their savage and profitless state, and make them a self-supporting and useful people in the community of nations. G.

NOTE.—This letter is written by a distinguished surgeon of the United States Army, and though he writes over a monogram signature, with a view of concealing his identity, he will soon realize the fact that he is too well and happily known to render a longer concealment possible. The readers of the "Journal" will be much pleased to learn that this is the first of a series of letters.—ED.

NEW YORK, April 3, 1871.

Mr. Editor,—At the risk of boring the profession, I will take the liberty of calling attention to another *uterine applicator*.

The applicator commonly used is a simple probe, which, being wrapped at the extremity with cotton, is dipped into any medicated fluid to be used, and then introduced into the uterine cavity. The objection to this instrument is, that in introducing it the fluid is wiped off by the os uteri, and little is left to come in contact with the cavity or the organ. The medication is therefore insufficient.

If fluid is thrown in by a syringe, however small the quantity, it is conceded on all hands that this procedure is not devoid of danger. DR. T. G. Thomas tells us that he has had violent and alarming symptoms produced by four or five drops of the permul-

phate of iron introduced in the most gentle and gradual manner by a small syringe. Similar statements are made by other distinguished gynæcologists, and although I have never seen these violent symptoms follow any of my own manipulations, I am constantly dreading such occurences, and have been steadily looking out for means to protect me against them. I do not pretend to have more wisdom or tact than gentlemen of my acquaintance, who tell me that such has been the result of their experience. Dr. Thomas seems to have such a horror of uterine injections, no matter how used, or for what object, that I think he is very rarely, if ever tempted to use them. I am bound to acknowledge the full force of such authority, and confess that I have become more cautious and timid than I was formerly, from the influence produced upon me by the experience of others.

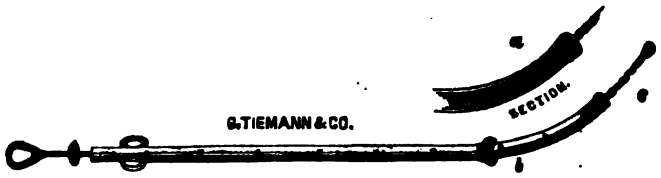
The instrument here proposed combines, I think, the advantages of a probe and syringe without the dangers of the latter.

It has never been satisfactorily explained why four or five drops of persulphate of iron or other fluid in use, thrown gently into the uterus, should be followed by alarming or even fatal symptoms, when the same substance introduced on an applicator is not. Four or five drops of fluid thus gradually inserted into the uterus cannot possibly fill the cavity of the organ so as to make its way through the fallopian tubes into the peritoneal cavity—its action must therefore be upon the wall of the uterus. I have in a former article on "Intra-Uterine Medication" attempted to show that when the syringe was used, the violent symptoms alluded to might possibly be explained by the supposition that the fluid was driven directly into the circulation. Such, to my mind, is still the most reasonable explanation.

The uterus, when not distended by any foreign body, has *no open cavity*, the back and front walls being in immediate contact. If a probe be introduced, the sides are separated by it. Now, suppose, as often happens, that the mucous surface is covered by vegetations, which, from the opposite sides, necessarily come together. If the pipe of a small syringe be passed

into a uterus in this condition, is it not clear that it may penetrate the granulations as easily as a probe would those on an ulcer of the leg? How often do we see the cavity of the uterus in a condition that will not permit the gentlest introduction of a probe without more or less hæmorrhage? If the nozzel of the syringe really penetrates the granulations, is it not clear that when the piston is forced down (even if it be done by a screw that throws out a single drop at a time), is it not clear, I repeat, that the fluid may pass directly from the syringe *into the circulation?*

Fully alive to the danger and difficulties to which I have alluded, I suggested an idea to Mr. Stolhmann, of the firm of Tiemann & Co., which he has worked out with his accustomed ingenuity, and produced an instrument that I have been using some weeks with much satisfaction, and which, to my mind, obviates most of the difficulties that have been complained of in uterine medication.



A glance at the accompanying wood-cut will show that this instrument is a modification of the old porte-caustique of Lallemand. It consists of a silver canula, through which passes a rod whose distal portion *c*, is made of strong twisted platina wire, capped with a solid platina bulb at the end, the latter being just large enough (as in the instrument of Lallemand) to close the end of the canula when the rod is retracted.

If it is desired to use the instrument as a simple applicator, twisted wire at *c* may be thinly wrapped with a little cotton, it is then dipped into any medicated fluid or ointment, and the canula pushed over it. The fluid being thus safely imprisoned, the instrument is introduced to the fundus of the uterus, and while the rod is held steady at that point the canula is drawn

back, the cotton exposed, and by twisting or turning the proximal end of the rod the medicated cotton is made to sweep over the uterine surface.

I prefer, however, to use the instrument in a different manner, and without the cotton wrapping.

The *small* cut represents a section of the distal end of the canula, with a piston or washer fixed on the rod one inch from the bulbous end. This piston is made to fit the canula snugly, and to act like the piston of a syringe. Now, let the rod and piston be pushed forward, as seen in the large cut, then dip it into iodine or other fluid, and *while immersed*, push forward the canula up to the bulbous end, you then have imprisoned from five to ten drops of the fluid between the piston and the bulb. If the instrument be introduced up to the fundus of the uterus, and while the rod is held steadily at that point the canula be retracted, the fluid is *turned loose* in the most gentle manner in the cavity of the organ without the force which necessarily accompanies the action of a syringe. There is no force exerted on the walls of the uterus, but the fluid is imbibed or attracted from the wires on all sides, while the solid bulb alone rests upon the parietes of the organ. Ointments, if preferred, may be used in the same way.

This instrument avoids, it seems to me, the dangers of the syringe, performs very thoroughly all the duties of an applicator, and if the uterus cannot be safely medicated in this way, I see no reason to hope for safety based upon any mechanical invention.

Very respectfully and truly yours,

J. C. Nott, M. D.,
No. 50 west Twenty-second street, New York.

Burlington, Ky., March 10, 1871.

Editor of Richmond and Louisville Medical Journal:

In the February number of your very valuable periodical, page 192, I see an article entitled "Manual Pressure Applied through the Rectum as a Substitute for Forceps in Breech Presentation;" by John E. Walker, M. D.

The first case he mentions came under his care in 1867. I fully endorse the correctness of his treatment; but object to his claim to originality. The nature of such cases naturally suggests digito-rectal pressure. I treated cases of this kind, as he directs in the article referred to, first in 1852, and have continued it, more or less, to the present time. Never used the forceps in this presentation.

Very respectfully yours, etc.,

A. SAYRE, M. D.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

ART. I.—THE HEALTH AND WEALTH OF WHEELING, ETC. By JAMES E. REEVES, M. D. 1867.

This work is prepared by the Health officer of the city of Wheeling. Some idea may be formed of its value by the following recapitulation of the subjects examined by him: Importance of sanitary science; geographical position; medical botany; geological stratification; climate; ethnography; topography; drainage, and sewerage; ventilation of public and private dwellings; water and water supply; advantages to a city of the earth-closet system; gas and gas nuisances; dangerous kerosene; slaughter-houses; soap factories; manufactories; alimentation (aliment?); schools and colleges; hospitals; marriages, births and deaths; biographies of physicians; medicines; the social evil; criminal abortion; vaccination, and epidemics.

This report is in every respect creditable to Dr. Reeves, both as a physician and a Health officer. While many of the views and principles advocated by him in discussing the interesting and important subjects which have been recapitulated may be justly subjected to criticism, it is fair and proper to say that

they are presented with discrimination and good judgment. Indeed, if the views of a writer are sufficiently positive upon any subject to make such views distinct and decided, it is impossible that they could be so presented as to escape criticism; they would, however, be more valuable on this account, for negative reports, like negative characters in life, unprofitably occupy space, and this single fact is all that characterizes them; it is profitless to notice or examine them.

Dr. Reeves's report is in many respects admirable, and a fit model for those occupying similar positions. He is not content to have his office a sinecure; nor is he willing to be an insignificant parasite on the municipal body. He has proved himself to be an excellent officer. He has educated the public mind. He has increased its appreciation of the calling and value of the physician. He has instructed, protected, and benefited the community which he represents.

It is to be regretted that Dr. Reeves has given so very brief, almost insignificant, a summary of the life of Dr. S. P. Hullihen. When a medical man has been so useful, so distinguished, so noble, so bright an exemplar as to have the community in which he lived erect over his resting-place a monument with this inscription, "Erected by the Citizens of Wheeling to the Memory of one who so Lived among them that they Mourned his Death as a Public Calamity," it is fitting, it is only proper, where one directs the public mind to his life, that the tribute should be worthy of the subject, and just to the dead. This has not been done.

Dr. Reeves's work will be read with interest and profit by all.

ART. II.—THE CHANGE OF LIFE IN HEALTH AND DISEASE INCIDENTAL TO WOMEN AT THE DECLINE OF LIFE. By EDWARD JOHN TILT, M. D. From the third London edition. Philadelphia: Lindsay and Blakiston. 1871.

It is unjust to the merits of this work to accord to it so brief

a notice. It fully deserves a long review. This is impracticable at present, and during the delay occuring the profession would not have their attention directed to a volume which should be, as soon as practicable, in the library of every physician. As a clinician, Dr. Tilt is very superior. His work is an embodiment of great facts. His deductions and conclusions are interesting and most valuable. There is no work upon this subject of equal value before the public. It is placed before the American public for the first time, though three editions have been published in London. It is admirably issued, and will command success.

ART. III.—PRACTICAL ANATOMY. A MANUAL OF DIRECTIONS. By C. HEATH, F. R. C. S., etc. First American from the second English edition. Edited with additions. By W. W. KEEN, M. D., Jefferson Medical College. Phiadelphia: Henry C. Lea. 1871.

There is no doubt but that this work is the best possible guide for the practical anatomist which can be obtained at the present time. It is abundantly and beautifully illustrated. The style is lucid and the phraseology concise. The directions are simple, easily comprehended, and ample. The additions made are the result of practical observation and matured experience. In the appendix there is given an admirable series of directions for making all kinds of injections, dry and wet preparations, with all of those desirable minutiæ so acceptable and valuable in the dissecting room. The work is admirably published. It will become a favorite work, if not an exclusive guide.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—HOR.

BY THOMAS E. JENKINS, M. D.

CHLORAL-HYDRATE AS AN EXTERNAL REMEDY.

When chloral-hydrate is applied to the skin and kept in contact therewith for a certain time, it is found to induce redness, and to cause pain, and if contact be prolonged, a bad and difficultly healing sore will result from the action of the irritant. The mucous surfaces of the nose and eyes are especially sensitive to the action of this agent. The burning sensation is like that produced by a cataplasm of strong mustard; at the same time a sedative effect is percerved which obtunds to some extent the smarting, while it does not prevent an excessive irritation of the skin. It does not blister, but the part becomes much inflamed, and more or less swollen, and, according to the duration of the application, a simple reddening of the skin is observed, or a suppuration extending through several weeks may ensue.

To apply chloral-hydrate as an irritant, it should be finely powdered, and evenly and thickly spread upon adhesive plaster of the proper size, leaving a clean margin of an inch wide all round. For its rubefacient effect, leave the plaster on for half an hour, as an irritant and to produce suppuration, six hours' time will be necessary. Delicate skins require less time, while thick and hard skins require a longer time to produce the desired effect.

THE LITHIUM-SPECTRUM USED TO DETECT PRIVY DRAINAGE INTO WELLS.

Well water does not contain an appreciable amount of lithia salts, and when a dram or two of a soluble salt of this alkali is put into a privy it will follow the drainage of the privy, and will be easily and surely found in the water of a well, if the drainage

filters into the well. In order to detect the lithia, a pint of the suspected water should be evaporated to dryness in a porcelain dish or cup, and a small portion of the dry residue burned on a clean platinum wire in the colorless flame of alcohol or of hydrogen before the slit of a spectroscope. If lithium be present in traces even, its characteristic line will flash in the spectrum.

MURIATE OF CINCHONINE OFFERED FOR SALE AS SULPHATE OF QUININE.

Five thousand ounces of what purported to be sulphate of quinine were lately offered for sale in Philadelphia. On analysis it proved to be muriate of cinchonine.

DIGITALIS.

Recent experiments by a French physiologist demonstrate that digitalis diminishes the relative amount of urea in the urine, and that this corresponds with the depression in the circulation, and is the corollary of it. The action of this agent as an antiphlogistic is thus explained.

OZONIC ETHER.

An ethereal solution of peroxide of hydrogen is the best agent for the disinfection of sick rooms.

OINTMENT FOR HÆMORRHOIDS.

℞.—Morphiæ sulph., grain, iij.
Ext. stramonii, grain, xxx.
Olei olivæ, grain, lx.
Plumbi oxy-carb, grain. lx.
Cerat. adipis, ℥., iij.
M.—Ft. ungent.

SUPPOSITORIES FOR PILES.

℞.—Butyr. theobromæ, ℥i.
Iodoformi, ℈i.
M.—Ft. supposit, viij.

EXTEMPORANEOUS AQ. CHLORINI.

Into a pint glass-stoppered bottle put forty grains of pure chlorate of potassa; add half an ounce chemically pure muriatic

acid. When the bottle appears to be full of chlorine gas, add one fluid ounce of distilled water; then stopper the bottle, and when the crystals have dissolved, add distilled water sufficient to bring up the measure of the whole to one pint.

NEW PROCESS FOR THE QUANTITATIVE ESTIMATION OF ALBUMEN.

The reagent is composed of

Carbolic acid, crystal, 1 part.
Acetic acid, 1 part.
Alcohol, 2 parts.

M.—The fluid containing albumen in solution is rendered slightly acid with nitric acid, and the reagent is added until it ceases to produce a precipitate. The whole is then poured upon a small tared filter well washed with distilled water, dried at 212°, Fahr., and weighed.

A DELICATE TEST FOR IRON AND COPPER.

The alcoholic tincture of logwood will produce a blue or bluish-black tint in water which has beeen run through iron or copper pipes, when neither tincture of galls, sulphocyanide, nor the ferrid and ferrocyanides of potassium show any reaction.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

The Pool of Siloam.—The miraculous efficacy of the Pool of Siloam, as recorded in the Scriptures, is familiar to us all, but its modern condition appears as fraught with danger, as was its ancient with the power of healing. Speaking of a fatal case of enteric fever, the surgeon of H. M. S., *Endymion*, Dr. Alex. Fisher, says:

"I attribute the origin of this case to the use of the water at Jerusalem, and consider ourselves fortunate in having escaped with only one case of enteric fever among the seventy-two persons visiting it. Without the walls of Jerusalem the water appears

to be very good, but inside it is received into vast tanks and reservoirs beneath the Haram area, and elsewhere. These, from what I saw in the excavations recently executed by the Palestine Exploration Society, are entirely without protection from receiving a large proportion of the sewage of the city, in some cases without even the slightest filtration through earth, or other obstacle. At the Fountain of Siloam and Pool of Siloam, the water distinctly tasted like soap-suds, brought down by the water from the baths, etc., close to the Temple enclosure." *Lancet.*

Opium Eating.—In a late number of the Philadephia "Medical and Surgical Reporter" Dr. Scheitzer, of Baltimore, relates the case of a lady, 28 years of age, who had consumed in two years 5,840 ounces of laudanum.—*Cincinnati Medical Reporter.*

MEDICAL NEWS.

'Nulla dies sine linea."

The profession in Europe and America will learn with universal regret of the death of the distinguished Felix Von Niemeyer, the renowned clinical teacher and practitioner. He died from the effect of exposure to hospital poison, during a period of personal exhaustion, while acting as chief of an ambulance corps.

The death of Prof. E. A. Clark, of St. Louis, Mo., will also be learned with regret. He died suddenly on the 16th of April, at Paris, Ill., while on his way to Europe. As the successor to Prof. P. F. Eve in the Missouri Medical College, as a prominent and successful surgeon, as a laborious and honest teacher, a successful and instructive writer, and an esteemed and distinguished gentleman, Dr. Clark has left a most happy and beautiful record. His family will receive the earnest sympathies of all who hear of their great and irreparable loss.

The Atlanta "Medical and Surgical Journal" has again made its appearance in the journal field. It is edited, as before, by the Drs. Westmoreland. The "Journal" is so well known, and its editors have been so long before the public, that further notice is unnecessary. Its third appearance is welcomed, and it is again placed on the exchange list.

"The National Medical Journal," at Washington, D. C., has been transformed from a Quarterly to a Monthly of fifty-six pages. Dr. C. Cox, LL. D., etc., retires from the editorial management, and is succeeded by Drs. S. C. Busey and W. Lee. These gentlemen are well known, and will undoubtedly discharge their duties with distinction and success. They regret that Dr. Cox was noticed in the April issue of this journal, as he was retiring from the field, and therefore powerless. This fact was, of course, not known. Drs. Busey and Lee accuse the writer of casting aspersions upon the physicians of Washington because, in his last issue, he stated that these gentlemen desired to make Dr. Cox President of the American Medical Association. The remark was made in irony or jest. The Washington physicians are very sensitive upon this subject, and regard even the allusion to such an action on their part as "an aspersion." No one can possibly believe that they would have been so foolish as to really perpetrate so monstrous an injury upon themselves and the Association mentioned. This humor of Drs. Busey and Lee is very good.

Virginia has a medical journal. It is termed "The Clinical Record," and is published at Richmond. It is a small octavo of thirty-two pages. The editors are not known.

Readers must prepare themselves to hear infinitely of *cundurango*. It is a vegetable growth of Ecuador. It "cures venereal diseases, ulcers, and cancers." The pathology of these morbid conditions being notoriously identical, why should not one medicinal agent cure them all? Hon. Hamilton Fish, E. Ramsey Wing, Dr. Cæsares, etc., are (through the State Department) arranging a medicinal *coup d'etat*, and the medical world

is warned in advance. Ricord, Cullerier, Hunter, etc., have been great stars in the pathological firmament, but these now wane; their cycle is ended. The medical world looks to Cæsares, Wing, and Fish, for light and future guidance!

Professor L. S. Joynes has resigned the chair of Physiology and Medical Jurisprudence in the Medical College of Virginia, at Richmond. Dr. Joynes has served as a teacher in this School for sixteen years. He has always been a faithful, earnest, accurate, and distinguished preceptor. His loss is a severe one. His place, so far as is known, has not yet been filled.

Professor Edward Warren has resigned the chair of Surgery in the Washington University at Baltimore. Dr. Warren may justly be regarded as the refounder of this old medical school. Since his connection with it, the operations of the school have been revived, and it has been an earnest and dangerous competitor to all of the medical colleges in that section of the country. Dr. Warren's record as a teacher has been most excellent, and his great labors for the school have been valuable, and fully recognized. His successor has not been appointed.

Professor Joseph Jones, M. D., is preparing for the press a most interesting medical work; it is to be called "The Medical and Surgical Memoirs." It will give the results of his valuable labors for fifteen years, and of his investigations throughout the Confederate army. It will be published by subscription only. Those wishing a copy had best secure one at once by addressing him at New Orleans.

A District Medical Society, under the name of "The Central Kentucky Medical Association," was organized at Danville, Ky., on the 24th of last March, composed of the counties of Boyle, Mercer, and Lincoln, (adjoining counties, however, are not excluded from membership), with the following officers to serve for the ensuing term of one year: President, Dr. Charles H. Spillman, Harrodsburg; Vice-president, Dr. H. Brown, Huston-

ville; Recording Secretary, Dr. George T. Erwin, Danville; Corresponding Secretary, Dr. A. D. Price, Harrodsburg; Treasurer, Dr. W. B. Harlan, Danville.

The meetings of the Association will be held quarterly.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

BREVITIES.

Dr. L. B. Edwards, of Lynchburg, Va., desires to have it known that it was not himself (the Secretary) who sent the Minutes of the daily sessions of the Virginia State Medical Society to a Philadelphia medical journal for publication.——— The attention of those interested is called to the advertisement of the "American Chemist," in the April number of this journal. The "Chemist" is a sterling work, and worthy of abundant support. ——— When Dr. E. Foree, of this city, had charges preferred against him in a (now) small local Medical Society for acting as supervisory medical officer of an insurance company which refused to pay its medical examiners in Louisville the five-dollar fee determined upon by the physicians of this city (upon the recommendation of the American Medical Association) the facts were referred, at his own request, to a board of umpires, consisting of distinguished physicians in Delaware, Alabama, and Illinois. Why these gentlemen, uninformed of the details connected with the facts in the case, were supposed to be better able to solve the problem at issue than a board of umpires in Louisville, no one can imagine; but in striving to do this they decided that Dr. Foree was in error. They did not question the unwise, untenable, and unjust legislation of a small Society which sought to enact a law in no respect warranted or supported by the code

of ethics, the code of justice and equity; but they decided that Dr. Foree was at fault. This gentleman, to his honor be it recorded, promptly resigned a valuable and lucrative office. His position is now occupied by Dr. W. B. Caldwell, of this city. It remains to be seen whether he will be as promptly dealt with by the Society mentioned. Such a course is unavoidable, unless there be gross injustice, inconsistency, or timidity manifested; or unless the untenable law be revoked and Dr. Foree fully indemnified.———At the meeting of the Virginia State Medical Society last Winter a strong effort was made to censure the conferring of Beneficiary Scholarships upon impoverished but deserving young men seeking an education in medical colleges. The effort was not successful, but it is remarkable that the Faculty of the College in whose Hall this summary legislation was attempted have, in their recent advertisement, offered to receive Beneficiaries without number and without restriction as to the appointing power; it being only necessary for students to correspond with the executive officer of the Faculty; *tempora mutantur et nos mutamur cum illis.*———To oblige many who desire such an arrangement to be made, the editor of this journal will receive subscriptions for the "London Medical Times and Gazette," and the "London Practitioner." The subscription price of the first is $12, and of the last $4. Those who subscribe for these journals through this office can obtain them (without the "Richmond and Louisville Medical Journal") for $14; with this journal (or the three journals) for $18.———The State Medical Societies of Ohio and Kentucky enjoyed their meetings in contiguous cities (Cincinnati and Covington) during the first week of April. The social reunions and the interchange of personal and professional courtesies were universally appreciated. The writer acknowledges with pleasure the kindnesses received from many in the editorial and professional circles of the cities mentioned.———Almost all of the departments of this number have been curtailed to afford space for the Transactions of State medical societies.

THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

VOL. XI. JUNE, 1871. No. 6.

ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—HYPODERMIC MEDICATION. By W. GREENE, M. D., Americus, Ga.

A few years since I wrote an article on "Hypodermic Administration of Medicinal Agents," which was published in the "Atlanta Medical Journal" (May 1867), and, so far as I know, was the first article on this subject published in any medical periodical of this country, and, strange to say, I have not since seen the subject *practically* treated by any author.

Many of my professional friends then thought I extolled this method of administering medicines extravagantly. I have continued, however, to use the hypodermic syringe more extensively, and not only have no reason to change my views therein expressed, but am well satisfied I failed to do the subject justice. It is a matter of surprise that some of the members of the medical profession entertain a prejudice against the use of subcutaneous medication. To account for it, I have sometimes thought it results from a lack of a little experience in the use of the hypodermic syringe. I am sure that when judiciously used, it is just as safe as medication *per anum*, *per os*, or *per* any other way, and it is certainly much more rapid, constant, and

efficient in its effects. It not only relieves pain *certainly*, but it sometimes cures, and cures permanently and radically—nay, frequently does so. I am also surprised that even leading medical journals contain so little on this subject. "Ranking's Abstract" and the "American Journal of the Medical Sciences," for the past three or four years, barely allude to it. The same may be said of the "Practitioner," "Richmond and Louisville Journal," "New Orleans Journal," and all others I have had an opportunity of reading. It is gratifying to know that my endeavors in this direction have been kindly received by the profession, and their appreciation manifested by requesting my further views, based upon more extensive experience, and guided by the experience and discoveries of others, whose results I have watched and read with great interest.

It is my present purpose again to call attention to this important and interesting subject. I shall endeavor to be practical in what I write, giving no facts that are not sustained by experience or well authenticated, for I am well satisfied that much, perhaps most, that is published in our medical journals of the present day contains too much speculative theory, and that too many medical men write for mere notoriety. Medical journals should be addressed to the requirments of physicians whose engagements do not permit them to search over the immense fields from which the fruit has been gathered; to practitioners in the country as conveying the results of the active labors of the "toilers" in the profession. Of course, I do not assume to lecture editors of medical journals, but I long to see them contain matter more practical, more instructive to the mass of doctors, and thereby more useful and valuable to the country.

The following points in hypodermy are well established, and I invite particular attention to their consideration:

1st. Clear, neutral solutions alone should be used, as they rarely produce irritation.

2d. Whether administered hypodermically, or by the mouth, or rectum, the chief physiological and therapeutical effects are the same *in kind*, yet varying *in degree*.

3d. Some drugs, when administered hypodermically or subcutaneously, produce certain symptoms which are absent when administered by other methods, and certain unpleasant symptoms are thus avoided which would interdict the use of, perhaps, an indispensable treatment.

4th. Rapidity of absorption and intensity of effect, as a general rule, may always be anticipated.

5th. Locality of injection, whether near or remote from the point affected, as to effect or relief, makes no difference.

Then the advantages to be derived from this mode of introducing drugs are (*a*) rapidity of action; (*b*) intensity of effect; (*c*) facility of introduction; (*d*) with some medicines, avoidance of unpleasant symptoms. Therefore, when rapid and decided effects of drugs are desired, this mode of administration ought to be adopted.

The medicines that have been principally employed by the hypodermic method are aconitine, the preparations of opium, atropia, quinine, strychnine, conia, podophyline, iodide of potassa, bichlorid of mercury, prussic acid, colocynth, aloes, veratrum viride, calabar bean, tr. cannabis indicæ, tr. hyosciamus, and ergotine. Those in general use and whose effects are best understood, are quinine, morphine, atropine, veratrum, calabar bean, ergotine, aconitine, and the bichlorid of mercury, the last experimentally, and its practical value not yet determined. I propose to speak of these particularly, giving my observation of them in detail, and the diseases and conditions for which they have been prescribed. Quinine, while I would not discard it from hypodermic use, must be prescribed with great caution. It often produces violent ulceration, destroying the tissue beneath the skin, and presenting to view the uncovered muscles, conveying to the mind the idea of the action of some corrosive poison. And it has produced this effect in my hands when simply suspended in water without any of the dissolving acids. I attribute this unpleasant and unfortunate result of the use of quinine to its great insolubility, and hope some means may be discovered by which these unhappy effects may be overcome. Another

very serious obstacle to its use is the liability of producing tetanus, which has, however, never been the case in my own experience, but has occurred in the hands of others, of which I will give a well-authenticated instance:

M. Arnold, a military surgeon at Constantia (Algeria), who had used quinine successfully in ague, warns the profession as to tetanus being induced by such injections, and mentions two cases—a child and an adult, who both died of traumatic tetanus from hypodermic injection of sulphate of quinine dissolved in water and a little sulphuric acid. Both patients were suffering from ague. I would, therefore, recommend great caution in the indiscriminate use of this medicine hypodermically. There are, however, circumstances under which I would not hesitate to use it, and do use it. Where life is endangered by the recurrence of a congestive chill, and my patient will not tolerate quinine by the stomach or rectum, or can not swallow it, or refuses to do so, or I have not time to wait for its constitutional effects by the ordinary method of administration, then, I repeat, I would not hesitate to take the *chances* of ulceration or tetanus.

The following is the solution of quinine I employ:

℞.—Sulph. quinine, grains, xxx.
Sulph. acid, *dilut.*, gtt., x.
Water, (boiling), ℥ss.

M.—Sig., inject from one-half to one drachm half hour before the paroxysm.

The preparations of opium and belladonna deserve special mention, because of their universal and almost unlimited use by the hypordermic method for the relief of pain and many of the distressing symptoms of disease, the effects of which are as satisfactory as they are astounding. While diseases differ from each other materially in cause, symptoms, and severity, there is one characteristic in common, which is *pain*, ever present and harassing at the bedside by day, unappeased by night, a phantom that walks by the side of the physician, ever ready to bar the door of the sick chamber against his entrance. In these

preparations we possess a therapeutic weapon that speedily overcomes and vanquishes this dread enemy. In my former article I recommended the use of the acetate of morphine, but now use, and prefer, the sulphate, because it is more soluble, and consequently less irritating.

The following is my solution:

℞.—Sulph. morphia, grains, xviii.
Sulph. atropia, grain, i.
Carbolic acid, grain, ½.
Water, ℥i.

M.—Sig., ten drops equal to one-half grain of morphine and one-thirty-sixth grain of atropia.

The carbolic acid produces a perfect solution without the further addition of other acids, and prevents the cryptogamic deposit or growth that you find in the ordinary solutions of morphine without it—thus enabling us to keep a larger quantity of the solution on hand, though it is best to use a fresh solution whenever practicable. The number of drops calculated for an ounce is three hundred and sixty (360), and not four hundred and eighty (480), as ordinarily supposed; the test of the drop being the amount that passes off as such from the point of the hypodermic needle. There ought to be a more reliable standard of the drop than now exists, and the needles of the syringe should always be the same size. Those manufactured by Lier and Charrier, of Paris, are of precisely the same size, and also those prepared by Tiemann & Co., of New York. I use the *sulphate* of atropia, because it is most soluble, and equally as efficacious. As will be perceived, I combine the atropia in this solution for obvious reasons. The question of antagonism between opium and belladonna and their preparations has excited considerable controversy during the past few years. I have not time to enter into a full discussion of this question, but will mention that it seems to be the result of extensive observation by learned men of the profession that morphine and atropine are naturally opposing poisons; but that while on the one hand atropine diminishes or removes the hurtful influence of morphine

on the brain without diminishing its sedative and pain-allaying power, yet on the other there is no complete antagonism between the two agents over the whole range of their action. In certain functions of the organism the antagonism is incomplete, in others it is wholly absent, and in respect of the urinary bladder, the effects of the two poisons are alike. It seems then that the evidence of antagnism is inconclusive, yet, in my opinion, the physician who does not administer the one in case of poisoning by the other, *fails to do his duty.* The success depends upon the prompt administration of a dose or amount adequate to the case in hand; and there can be no other rational guide to this than the quantity of poison taken and probably absorbed, as evinced by existing symptoms. The combination of the atropine in the morphine solution seems to be valuable then in many respects. The essential effects of opium are both intensified and prolonged by the concurrent action of belladonna. It prevents the nausea frequently that would otherwise follow the use of morphine. This combination, as a general diffusible stimulant, surpasses all other drugs, and is a most appropriate and hopeful therapeutic means in all diseases where there is failure of the heart's action, *i. e.*, the depression of the sympathetic nerve-force. It must be borne in mind that an excessive dose will produce depression from over-stimulation. Given with a view of exciting or sustaining the heart's action, the dose will range from the 1-100th to the 1-60th of a grain of atropia, and should never exceed the 1-40th It is especially in cases of the neuralgias—*of pain of every character*, that the administration of this solution exhibits to most advantage.

The effects of a few drops of this solution in a case of facial neuralgia or hepatic colic, for instance, injected beneath the skin of the forearm into the areolar tissue, are sometimes almost marvellous; usually within ten minutes the patient is quite free from pain. The effect of one such dose is startling to any one who has not had some experience in these cases—the beneficial influence continuing for several hours, and in ordinary cases not arising from organic disease, effecting a cure. It is remarkable

that morphine thus used has a more permanent effect in allaying pain than when given in any other way. After a fracture has been reduced and the limb placed in a proper position, a small dose injected into the areolar tissue of the limb is of great value in preventing muscular spasm, and, I think, ought never to be neglected. In the distressing vomiting from sea-sickness, which sometimes imperils life, I imagine this solution injected over the region of the stomach would produce charming relief, as it certainly does in other vomitings. I have seen hiccough complicating pneumonia, which had resisted for days various treatment and strongly threatened death, instantly relieved by injecting six drops of this solution into the intercostal region. Puerperal convulsions after labor are almost always relieved by the injecting of ten drops in the arm. In the distressing paroxysms of asthma, I have never found any remedy so efficacious. In obstetric practice I find the subcutaneous injection of this solution very useful under the following circumstances and conditions, viz.

1st. During painful dilatation and expulsory periods, especially in primiparæ and in norrow pelves. 2d. In spasmodic pains. 3d. In painful complications of the process of labor in general. 4th. In severe after-pains. It is in the first category of cases that I have especially employed it, injecting one or both thighs. I might go on and occupy pages, enumerating the conditions and circumstances where these drugs have been employed with complete satisfaction. I will only further state that wherever *pain* is present, which no human being ever willingly endured for a single moment, always use the hypodermic syringe. In children and delicate females I employ the compound liquor of opium, prepared by Dr. Edward R. Squibb, in doses from five to fifteen drops, or more, always beginning with a minimum and gradually going to a maximum dose. There is no risk whatever in using it on children, even infants. In small children, I usually introduce the medicine under the skin at the back of the neck. The pain inflicted is of no consequence, and there is much less annoyance than pouring it down their throats. The tolerance

of the human system to the preparations of opium, administered hypodermically, is very surprising, and I shall briefly allude to it. There are several cases on record, well authenticated, of employing it to such an extent that the body was perfectly covered by the points of puncture. There is a young man in this city, who, during the past three years, has had the instrument used upon himself about *four thousand* times. He had scarlatina when a child, and the inflammation, extending from the tonsils and fauces to the eustachian tube, resulted in disease and ulceration of the bones of the ear, causing most violent paroxysms of pain. He could not take any of the preparations of opium by the stomach without the greatest distress, and nothing else seemed to give him any relief. The hypodermic syringe was called into requisition and Squibb's compound liquor of opium in twenty-drop doses first used with immediate and marked relief whenever the attacks came on. He visited and consulted the most eminent medical men in the United States, and permanent relief was pronounced by them impossible. After various medication, it was decided to direct remedies alone to the relief of these paroxysms of pain, not supposing the unfortunate young man could much longer survive. Thus he has gone on, using the hypodermic injections daily, generally five or six times in twenty-four hours, for about three years, occasionally increasing the dose, until now it only requires about one grain of morphine and 1-30th grain of atropine at each injection. He does not seem any worse now than two years since, except some loss of flesh and a weakening of his intellectual sensibilities, together with an impairment of vision, requiring the use of glasses in reading, produced by the atropine. He carries about his person constantly, wherever he goes, a hypodermic syringe and solution of morphine and atropine, to be used whenever an attack comes on, and so common is it in the city that any one who first gets to him uses the instrument—even a negro servant, who often accompanies him. He carries a little blank-book in his pocket, properly ruled, where the time of day and number of drops of the solution are recorded, and referred to each time

before giving him another injection, as a guide to the amount necessary to be used at that time.

This is one of the most remarkable cases on record of the use of hypodermic injection. How much longer he will survive in this unfortunate condition no one can tell. He is daily about town, and can walk several miles. It is remarkable that he has not suffered more local trouble from these frequent punctures. They have been made almost exclusively in his arms from his shoulders to his hands over and over again, until the areolar tissue is very much thickened and indurated, and has only had an occasional abscess, which gave no further trouble after the pus had been discharged. This case convinces me of the importance and value of the combination of atropine with morphine when used hypodermically. I find that it does not require such constant and rapid increase of the morphine, and there is less risk of a patient becoming addicted to its habitual use when thus combined. In view then of these facts, and the unlimited calls that may be and are made upon the physician where the hypodermic use of remedies can be so advantageously employed, is it not highly important that he should always have a standard solution at hand, the strength and effects of which he is well acquainted with, that he may quickly and safely apply it in cases of emergency? I would suggest that every physician have a hypodermic case, which he can either carry in his pocket or medicine chest, containing a syringe with two or three needles, and four vials (drachm), filled with the solution of morphine and atropine, Squibb's compound liquor of opium, Norwood's veratrum viride, and oxalate of cerium—the last to relieve nausea when produced by any of the other medicines, given in doses of four or five grains on the tongue. I find nothing better. I would not feel that I had performed my duty if, in this connection, I failed to caution my professional brethren concerning the indiscriminate use even of these drugs. Atropia is a powerful poison, the physiological action of which has of late years been the subject of careful experiment and research; the most recent and able writers being Dr. John Harley and Dr.

Meuriot. In poisonous doses the frequency of the respiratory movements are *decreased*, through paralysis of the pneumogastic nerves, producing restlessness, insomnia, and delirium, until the patient passes into *coma* and dies. The best antidotes are morphia and extract or tincture of calabar bean, and I repeat that the physician who does not use the former *fails to do his duty*, notwithstanding the conflict of opinion on this subject among our learned professors. I will directly speak more particularly of the calabar bean.

Morphia, though rarely deceiving our most sanguine expectations, is not altogether harmless, and may produce frightful symptoms. I will mention a case:

"Mrs. H. C., aged thirty-five, in good health otherwise, had been kept awake for seventy-two hours by intense neuralgic pain on the left side of the head, face, and neck, arising from a carious molar tooth on the left side of lower jaw. She was injected at 1 A. M., June 28th, with one-third of a grain of acetate of morphia dissolved in about four drops of water, under the skin of the left arm just over the insertion of the deltoid muscle. No blood appeared at the puncture. In about fifteen seconds tightness of the chest and difficulty in breathing were complained of, and the patient asked to be raised, saying she felt as if she were dying. Her face and lips now became pale; speech became indistinct (not inaudible); pulse irregular; some spasms of the facial muscles took place, and she fell back, to all appearances dead. Cold water was freely dashed over the face and chest, and as she was unable to swallow, her tongue was rubbed over with sal. volatile, and ammonia applied to her nose, artificial respiration being kept up all the time. During the while her face was bleached, pulse not to be felt, and respiration not to be perceived. Insensibility continued for about three minutes, then, happily, one or two feeble beats of the pulse, and a shallow inspiration or two showed returning animation. She then became conscious; pulse feeble and irregular; respiration slow; fingers remained numbed, and both thumbs were firmly drawn into the palms of the two hands.

This passed off in about six minutes, leaving her feeling very ill, but free from the neuralgic pain, which did not return. There was no feeling of nausea, and no attempt at vomiting during any part of the time."

I will now leave the discussion of this interesting part of the subject to speak briefly of the physiological and therapeutical effects of the calabar bean, employed hypodermically, which presents many interesting and curious developments, and opens an extensive field for research and experimental investigation. During the last few years M. Bournville, house-surgeon to the Paris Hospital, has employed it with care, and studied its effects on several diseases. Among the results may be mentioned the following:

"Every one knows that the calabar bean, when instilled into the eye, produces a very remarkable contraction of the pupil. Now, he states that it is surprising to observe that, when it is injected under the skin, there ensues, on the contrary, a dilatation of the pupil, or else the ocular diaphragm remains unchanged. A second point which he notices, is the antagonism between the calabar bean and atropine. He verified this phenomenon in six guinea pigs. After having injected the bean, atropine was injected. The animals did not succumb when both medicaments were injected in fit proportions; but two or three days afterwards a dose of the bean, equal to that which had been at first employed, being injected into the surviving animals, *they all died.* This obviously shows the antagonistic action of atropine against the calabar bean. He also confirmed these experiments on the human subject, and treated with more or less success epilepsy, chorea, and tetanus.

Dr. Eben Watson states that, in all his experiments, the pupils remained either unchanged or were dilated. Mr. T. Wharton Jones, in a suggestive paper published in the "Practitioner" for September, 1869, refers to this surprising fact, and says: "The calabar bean is the direct antagonist of atropine," and asserts that "the local application of the drug causes contraction of the veins and atropia of the arteries."

Dr. Alois Monti, of the St. Anne's Child's Hospital, reports three cases out of five of trismus neonatorum cured by this remedy. He prefers the hypodermic method because he considers the internal use uncertain. He repeats these injections every ten or fifteen minutes until the spasms cease; and then intermits them even for several hours until the cramp returns again. For new-born children he uses one-tenth grain of the extract for a dose, and goes up to one-third, or one-half, or a whole grain a day. Older children can commence with one-third of a grain for a dose. For internal use, one to four grains a day may be given.

In the "Richmond and Louisville Journal" (August, 1870), Dr. F. C. Wilson reports a case of epilepsy in which there had been six successive convulsions, at intervals of twenty minutes, relieved by ten minims of the tincture of calabar bean used subcutaneously. In the "Medical Examiner," for July 1870, Dr. Newman reports a case of tetanus successfully treated by the hypodermic injection of calabar bean.

The "Glasgow Medical Journal" (1869; p. 300) publishes two cases treated by Dr. William Fenwick. The first case died in less than thirty-six hours after the commencement of treatment, owing to the culpable negligence of the attendants; the directions being very ineffectually carried out. The second case recovered, and is especially interesting, owing to the suspension of the medicine being three times followed by increase of symptoms, which yielded to its renewed exhibition. Dr. Eben Watson, in the "Practitioner" of Sept., 1870, in a paper "On the Treatment of Tetanus by the Calabar Bean," details several cases—eighteen, I believe, in which he reports ten recoveries—and always found the remedy to act decidedly better when introduced under the skin; in fact, considers this the most essential point in its administration. Thus we perceive a wide and interesting field for the hypodermic use of this medicine. My own opportunities have been limited for its exhibition. In a case of epilepsy I found it exceedingly efficacious. I have drawn from reliable and trustworthy authority, and hope suf-

ficient evidence has been adduced to induce my professional brethren to test its virtue and efficacy.

I will now proceed to speak of veratrum viride, a most familiar remedy, and am sure there is no medicine in our materia medica that deserves more praise, and whose effects on the human system are more uniform, and, consequently, more to be relied upon. All are acquainted with its effects upon the human system when administered by the mouth, and it is therefore to its hypodermic use that I invite your attention. It effectually takes the place of the lancet when thus administered, and acts more rapidly, more energetically, and more satisfactorily. When arterial excitement or tumultuous action of the heart is sought to be controlled, this medicine, injected under the skin in proper doses, accomplishes a desideratum most devoutly to be wished for. In the convulsions of children, the result of high arterial excitement, so trying to the physician and frightful to the relatives and friends, we possess a certain remedy in veratrum. I begin the injection under the skin at the back of the neck in half-drop doses, which may be increased to two drops, combined with a few drops of warm water; and if its constitutional effects are not produced in ten or twenty minutes, cautiously repeat the dose. I frequently combine with the veratrum five or ten drops of Squibb's compound liquor of opium. In the first stage of pneumonia, where it is important to produce rapid sedation, or where the stomach fails to tolerate it, I find it invaluable. I use it cautiously, beginning with one or two drops. I will here relate a case in point, occurring a few days since in the practice of my friend Dr. George F. Cooper, of this city, in his own words:

"Lucy, mulatto girl, aged sixteen, attacked with double pneumonia, saw her fourth day; pulse 125; respiration labored and rapid. Injected one drop of Norwood's veratrum under the skin of arm. In twenty minutes pulse reduced to 118. Injected two drops more. In twenty minutes pulse reduced to 90; then ordered it continued by mouth every three hours in four or six-drop doses. Her recovery, though not rapid, was

uninterrupted and complete in eight days. No blister or other medication used, except two or three purgative doses of mercury."

In puerperal convulsions veratrum is a most valuable remedy. I will give two recent cases in which I employed it, thereby better conveying to the mind the mode of its administration and its effects on the system.

January 8, 1871.—Called to see Mrs. W., aged thirty-eight, in consultation with my friend, Dr. Bird, two miles from town. I arrived at her bedside at 11 o'clock, P. M. She lacked two months to the completion of her term. Nothing unusual had occurred during gestation, her general health being uninterrupted; had borne several children, and never required the presence of a physician during her labors. She had been having convulsions since early in the morning at intervals of twenty to forty minutes; had taken large doses of laudanum, and been kept under chloroform all day; bowels been opened with enemata; pulse very large, and as hard a one as I ever felt; it beat 130 times to a minute. The os uteri was just large enough to admit the point of my index finger, and very rigid. Had a dreadful convulsion a few moments after my arrival. Immediately opened a large median vein in her right arm, and allowed blood to flow until her pulse had sunk very low. She had no return of the convulsions for about an hour, remaining nearly comfortable; when her circulation began to increase restlessness came on, and she had a most violent eclampsia, followed by apoplectic stertor, from which she partially recovered in half an hour. I immediately gave her ten drops of the solution of morphine and atropine, which had the effect to quiet her at once; and she rested and slept comfortably for one hour and forty minutes. She awoke much excited, and another convulsion came on. I determined then to give her veratrum subcutaneously. By this time she refused to open her mouth or swallow, the stupor being more profound than before. This was fifteen minutes past 2 o'clock; pulse 140; injected two drops of Norwood's veratrum. In ten minutes pulse

reduced to 130, with no disposition to go lower; 2½ o'clock injected three drops more. In fifteen minutes slight impression noted on pulse; convulsions strongly threatened. Fifteen minutes of 3 injected four drops; 3 A. M. pulse reduced to 90 beats, breathing much improved and sleeping quietly. Awoke at 6 A. M. perfectly rational, with ability to swallow. Directed following prescription:

℞.—Bromide potass., ℥i.
Water, ℥viii.

M.—Sig., one tablespoonful every six or eight hours in half a glass of water.

The circulation was kept under control for two or three days by occasional doses of veratrum combined with the bromide. She continued to do well until February 12th, when I was sent for, and she was delivered of a dead fœtus of eight months. Labor was rapid and easy, from which she recovered as usual. Now, could anything be more charming than the prompt result of this medicine, and that after the much vaunted remedy (bleeding) seemed to fail? The veratrum did not produce the slightest nausea. Dr. Bird rendered valuable assistance in conducting this case.

[Since this article was commenced I have witnessed a most terrible case of puerperal convulsions, the treatment of which presents many interesting features. I will merely give my notes of the case as taken down at the bedside.]

Called March 5th, at 11 A. M., to see Mrs. H., in consultation with her attending physician, Dr. Hudson. She was a woman of a very susceptible nervous constitution, and labored under constitutional irritation from the commencement of her pregnancy. She was twenty-five years old, and this her first labor; had been married about twelve months; was expecting her labor every hour, the time being out; had complained of intense headache for several days. About 4 A. M. she awoke her husband to do something for her head. By the time he could make a light she had a convulsion; had no uterine pain whatever. The convulsions returned every ten or fifteen minutes until Dr.

H. arrived (about an hour afterwards), and gave a large dose of morphine and put her under chloroform, when the convulsions were delayed an hour or more in their intervals. About 10½ o'clock they became more rapid, and I was sent for. She had a convulsion when I arrived, and immediately sunk into a stertorous, apoplectic sleep. I felt that the fatal blow had been struck, effusion or extravasation having taken place. There was no uterine action; the os uteri was firmly contracted, very rigid, and the perineum excessively hard and thick; the vertex in the first position. The fœtal heart could be distinctly heard. Withdrew the chloroform; bled her eighteen ounces, and gave ten drops of solution of morphine and atropia fifteen minutes thereafter; had five convulsions in quick succession, the last one lightest. Eleven and a half A. M., pulse 145; injected one drop veratrum in a few drops of water; in ten minutes pulse reduced to 130; in twenty minutes, 120; 12½, convulsion. Eight minutes to 1 P. M., gave one drop veratrum combined with eight drops of solution of morphine and atropia; pulse 115. One twenty-five P. M., pulse 135, and convulsion came on; bled her twelve ounces; 1:32 injected one-half grain ergotine, combined with two drops veratrum, in thigh, pulse being 135. In eighteen minutes pulse reduced to 120; twenty minutes, no change; twenty minutes more, pulse 118; 2½, convulsion; 3:7, pulse 128, os uteri yet contracted, and no uterine pain; coma being profound, and stertorous rapid breathing; child alive; 3 P. M., ruptured membranes, and injected half a grain of ergotine in thigh, combined with three drops of veratrum; 3:45 pulse 120; injected three drops of veratrum; in ten minutes pulse 116, and gave half a grain of ergotine; some uterine contractions; water all passed off; os dilated; size, half dollar; 5 P. M., severe convulsion; 5:40 half a grain of ergotine injected in abdomen; uterine contractions decidedly increased; coma very profound; 6:45 P. M., convulsion; uterine contraction going on; 7 P. M., head of fœtus descended so that forceps could be applied, which was immediately done, and a twelve-pound child extracted. Mother died in one

hour, and the child doing well. This woman never spoke or exhibited the smallest sign of reason or sensation from the moment of invasion, but sunk at once into the stertorous apoplectic sleep that finally led to the sleep of death. Notwithstanding the functions of the brain were oppressed from the beginning—the hemispheres, the cerebellum and the tubercula quadrigemina remaining extinct as to power—yet our remedies did much good. This is very interesting. The veratrum controlled the circulation and lengthened the intervals of the convulsions from ten or fifteen minutes to one hour and twenty minutes. The ergotine speedily and promptly excited uterine contractions, and thus enabled us to save the child. We could not have done so without it—the mother's case already a hopeless one—the child alive, as the strokes of its heart indicated—profound coma and total inability to swallow, and no effort of the womb whatever to expel its contents—it did seem that the mother would succumb with a live child in her belly. The ergotine injected under the skin of the thigh, and abdomen aroused this dormant uterus, and it responded by sending the fœtal head down into the vagina, where it could be reached by forceps and delivered. I am indebted to Dr. Hudson for valuable assistance in this case and courtesy in obtaining its history.

I have found the addition of veratrum with the morphine and atropine solution speedily relieve distressing paroxysms of asthma that had resisted all other treatment. I have never seen any reference to the hypodermic use of veratrum, and hope by this imperfect account of its employment to attract the attention of the profession, that its value and efficacy may be further developed and illustrated.

I come to speak of ergotine. In controlling excessive menorrhagia there is no remedy equal to it, used hypodermically. Severe cases of this character that had resisted various treatments and strongly threathened death, have yielded almost instantly to the hypodermic injection of ergotine dissolved in equal parts of water and glycerine. In my hands it has produced remarkable effect in the hæmorrhage following delivery.

Under these circumstances of sudden and alarming bleeding we want a remedy that speedily affects the system. I present it to the profession, and ask for it a faithful trial. The dose is from one-third, one-half, or even one grain dissolved in equal parts of glycerine and water, and the injections repeated every fifteen or twenty minutes. The hypodermic use of ergotine in aneurisms is attracting considerable attention. I have had no opportunity of testing its value in these cases, but will mention two cases reported by Langenbeck. The first was that of a man aged forty-five, with a pulsating tumor in the neck the size of a fist, the pulsations in which greatly annoyed the patient. On the 6th of January, 1869, Professor Langenbeck made a first subcutaneous injection of 0.03 gr., (half a grain), watery extract of ergot on a level with the aneurism. After this the pulsations became weaker, and the tumor diminished in size. Between the 6th of January and the 17th of February, there were injected, at regular intervals of about three days, two grammes of ergotine in doses varying from 0.03 to 0.18 grammes, (half a grain to three grains). The tumor was notably diminished in size, and the pulsations were less strong. The second case was that of a man aged forty-two, who had for twenty years a pulsating tumor of the radial artery of the size of a hazelnut three centimetres from the hand. Prof. Langenbeck injected 0.15 grammes of ergotine between the skin and the tumor; the next day the aneurism could not be detected. It reappeared momentarily in consequence of a slight effort made by the patient, but it had completely disappeared at the end of eight days. The editors of the "Archives Generales," (November, 1869), from which journal this account was condensed, (see "American Journal," 1870), justly remarks that "these results seem extraordinary and to have been obtained very promptly." I hope to hear of further experiment with this remedy in this disease.

The hypodermic injection of the salts of mercury in the treatment of constitutional syphilis is engaging the attention of the profession, especially in the East. I have had no patients recently who would submit to its use, and therefore have no per-

sonal experience with it. I am, however, well satisfied of its utility and efficacy, and shall not hesitate to employ it. I will briefly glance at what eminent medical men say of it by way of attracting the attention of the profession to its employment, for a few experiments, conducted by master hands in all that relates to therapeutics and pharmacy, are more important and reliable than a far greater number would be detailed by persons of less authority.

M. Diday, at a meeting of the Lyons Medical Society, detailed the result of twelve cases of syphilis treated by hypodermic injection of corrosive sublimate. His solution consisted of distilled water, 45 grammes, corrosive sublimate, glycerine, of each ten centigrammes. Two or three injections were practiced daily, the mean quantity of the sublimate introduced being seven or eight milligrammes. The back is used for the operation, because pain is less complained of there, or if the patient injects himself, the sides of the chest and anterior or external parts of the thighs are used, alternating these regions so that the punctures do not succeed each other too rapidly or approach too closely. He says: "I must admit great embarrassment in pronouncing any positive opinion on this new method. In fact, there is no occasion to pronounce any positive opinion on a remedy which has so recently made its appearance. At first, one is struck and seduced by the promptitude of some of the cures which it effects." M. Diday believes it most advantageous in the squamous forms of syphilis, and warns against its use in the ulcerative forms. In none of his cases was the slightest mercurial affection of the mouth produced.

Dr. T. J. Walker ("British Medical Journal") records the results of his experience, in ten cases, in which it was fairly tried, and found immediate improvement after one or two injections. He says: "In the first case, after three weeks treatment, and the injection of only 7-10ths of a grain of bichlorid of mercury, the change in the condition of the patient was surprising. In the second case, these symptoms, which were rather of the secondary type, were all relieved after six injections, and the

tertiary symptoms yielded with unusual rapidity to the iodide of potassa when it was commenced." The solution he employed amounted to one-third of a grain of corrosive sublimate dissolved in ten drops of water and glycerine. This solution may be used every day. Dr. Walker states that the pain and inflammation at the seat of the puncture are comparatively slight, and considers the results he has obtained justify its trial in large institutions.

The hypodermic syringe is an exceedingly useful little instrument for drawing out liquors for diagnostic and other purposes. It has been made use of for obtaining blood for examination from cholera patients. It has been used for the operation of transfusion, and, with slight modification, prefered above all other instruments.

Dr. Mader, of Vienna, used it in making a diagnosis in a case of ascites, in which a doubt existed whether chronic peritonitis or cirrhosis hepatis caused the dropsy. The character of the liquid proved it to be a case of cirrhosis. He also pumped out a chronic serous exudation from the pericardial sac of an aged female; the first operation yielded a few ounces of liquid, and relieved the urgent symptoms; at a second trial three ounces were removed. Mader thinks the operation deserves much regard, as it is easily performed, and attended with comparatively little danger. In these operations, the canula should be provided with a stop-cock, so that air may not enter when the body of the syringe is detached in order to empty it, and the body of the syringe should be made of greater capacity.

I will not lengthen this already too extended review by referring to other remedies that are used hypodermically, and mentioned in the beginning of this article.

The field is wide open, and the opportunity for research and investigation inviting, and offers a rich harvest to the industrious lover of science. I feel that I could not practice medicine without the hypodermic syringe—know that I am indebted to it for many a night's sleep and relief from restless anxiety. Instead of worrying all night, as I have many times done with cases of colic, delirium tremens, gout, rheumatism, convulsions,

neuralgia, nausea, and nervous excitability, I have relieved my patients in fifteen or twenty minutes, and returned to my bed.

ART. II.—CASE OF PREMATURE LABOR WITH TWINS—PARTIAL PLACENTA PRÆVIA, WITH OTHER PECULIARITIES. By WM. H. DOUGHTY, M. D., Prof. Materia Medica and Therapeutics in Medical College of Georgia, Augusta, Ga.

The several cases of multiple births reported by Dr. J. M. Toner, of Washington, D. C., in the February number of the "American Journal of Obstetrics," call to mind the circumstances of a recent delivery of twins, which, together with the previous history of the patient, are perhaps of sufficient importance to warrant publication. The interest of the case centers not so much in the twin births at a premature period (this being quite a common occurrence) as in the existence of a partial placenta prævia, in the peculiar condition of the margin of the placenta next the os uteri, and into which one of the cords was inserted, making, to this extent, what is known to obstetric writers as "battledoor" placenta, and in the unusual character of preceding hæmorrhages.

On the 2d of November last I visited A. R., a colored woman in thrifty circumstances, about thirty years of age, large frame, good general health, then in her fourth pregnancy; supposed to be pregnant about two and a half months. Prior to her last pregnancy (now two years since), she suffered with *retroversion*, which was corrected by wearing a Meigs ring pessary, with other suitable treatment. An unusual amplitude of the pelvis was discovered at that time, which predisposed her to such displacements. On this occasion she was evidently threatened with an abortion, having hæmorrhage, pain in the abdomen and back, and complained of great pressure and weight low down in the pelvis. Knowing the amplitude of the pelvis, and how

easy it would be to reproduce the retroversion at this favorable time of gestation, I placed her in the *knee-chest* position for a short time (also advising her to assume it on every occasion after rising for necessary duties) then in the *semi-prone* position, with the hips elevated by a pillow, and gave opiates and astringents for the arrest of the parturient efforts. In fourteen days she resumed her ordinary light duties.

On the 30th of November I was consulted more particularly in reference to the hæmorrhage, which had never ceased more than a week since the effort at abortion. Increasing complaint was also made of the pressure and weight about the pelvis, which almost incapacitated her for locomotion, and it was regarded as singular that, during the day, the loss of blood was slight and pale, but at night, when lying down, a more decided flow occurred. This was now so constant as no longer to escape attention. Ordinarily, hæmorrhage is increased by exercise and restrained by quietude and rest. It may be proper to observe that there was no accompanying leucorrhœal discharge, and her general health was good. A quiet life was enjoined, together with the daily use of cold astringent vaginal waters, and night and morning two grains persulphate iron for a few days.

About 5th of January saw the patient again; ascertained that the same state of affairs still existed, the loss of blood increasing at irregular intervals with the advance of pregnancy, sometimes changing to an almost colorless discharge for a few days, thus giving hope of an entire abatement, and then suddenly gushing forth, *chiefly at night*. Quickening has been felt, from which time she reckons her term. I advised the same general treatment, with gallic acid and iron by hydrogen, three times daily, to be taken at least one month.

After this I lost sight of the case for a month, and hoped that the trouble was at last overcome, but to my chagrin and vexation, on the 6th of February, was summoned to her in haste, on account of profuse flooding that occurred soon after lifting a piece of furniture, with urgent signs of abortion coexisting. A digital examination revealed the uterus very low

down, pressing upon the floor of the pelvis, and inclining towards the right, the os being slightly open, so as to admit the end of the finger. Abortion was prevented, the hæmorrhage being restrained promptly by the usual means, but never entirely ceased. I visited her from time to time until the 16th of February, when, fearing that there might be some local condition of the os and cervix that determined the constant bleeding, an examination with the speculum was made. It is well known that the frequent slight hæmorrhages of pregnant women, attending chiefly the early months, and sometimes forerunners of abortion, are due to abrasions and ulcers on the os, which yield readily to proper local treatment. I found the latter neither inflamed, ulcerated, nor granular, thus showing that the source of the hæmorrhage was within the organ, and suggesting possibly placenta prævia.

In addition to the measures already adopted, I advised an abdominal supporter made by the proper adjustment of an ordinary wide bandage around the hips, with the view of diminishing the pressure upon the pelvic structures; also, the daily introduction of a plug of cotton, saturated with a moderate solution of the persulphate of iron, into the vagina, seeking thereby the aid of a more direct hæmostatic. From the first she derived great comfort; the latter was never employed, under the delusive hope that it would yet cease with the more familiar means.

On Sunday, 12th March, another profuse hæmorrhage suddenly startled her, producing faintness, etc. She went to bed, employing cold applications and other means, so often used heretofore, with temporary success for its arrest. On the 16th, the hæmorrhage meantime having been restrained, she had a chill, followed by high fever (which she now has), and about 7 o'clock P. M. labor-pains were felt, which continued with some regularity to the time of my visits (10 o'clock P. M.) On examination, the os was dilated to the size of a silver quarter, its edges thick, the neck being not yet obliterated by the encroachment of the expanding body. No part of the ordinary placental mass could be identified in or near the os, although the

membranes toward the left margin of its circumference seemed unusually dense, feeling like a smooth, thick, folded fibrous mass, thus making the os much thicker at that point than elsewhere. The gravid organ was low down in "the pelvis," the hard surface of the presenting part (vertex) being more readily discerned through the uterine structures on the right side than on the left, where it could not with certainty be detected. The woman stated that the hæmorrhage had ceased since the labor commenced.

Knowing that she could not possibly be beyond seven months pregnant, and hoping to arrest this third attempt at miscarriage, a full dose of opium was prescribed, and I left, with instructions to be sent for, if the pains became more active during the night. At 3½ o'clock A. M. was called again, and found the os fully dilated, the second stage of labor having commenced; vertex presentation; right occipito-posterior position. There had been no hæmorrhage of moment during the night. At 4 A. M. a premature infant, weighing about two pounds (attached by a remarkably small, short cord) was born, which made feeble efforts at respiration. The hand placed upon the abdomen showed little reduction in the size of the womb, and an examination, per vaginam, that the placenta was not detached, the insertion of the aforesaid cord being readily felt at the left side just within the os, and above was the pouch of membranes enveloping another child. Abdominal frictions and a dose of ergot brought on pains, with a descent of the presenting part, the vertex also, and in fifteen minutes the birth of this occurred, enveloped in its membranes. This, the largest and most vigorous, was attached by a long, large gelatinous cord that encircled its neck. The uterus contracted well, expelling the placenta immediately, with little loss of blood. Both children died within an hour. The conformation of the placenta was peculiar; while preserving the ordinary circular outline, one part of its margin was thin, beveled off, and composed chiefly of duplicated folds of membranous structure entirely destitute of what is known as the parenchyma of the after-birth. Into

the free margin of this attenuated portion the small cord of the first child was inserted, the vessels composing it wending their way quite prominently through its translucent folds towards the more material part. It was about one-third the size of the other, which was implanted midway between the centre of the placenta and the opposite thick, fleshy, border; the first, with the corresponding infant, resembled a dwarfed, stunted growth from an impoverished soil; the second as pointedly indicated the superiority of its vascular connections. This is in harmony with the remark of Dr. Toner, "that the child having the cord attached nearest to the centre of its placenta will be the best nourished, and therefore the largest."

Surveying the case now in its details, it becomes quite clear that the *position* of the placenta determined the uncontrollable and (in a certain sense) ceaseless hæmorrhage for four months, or longer. Its peculiar form and implantation upon the cervix so near the os, served to impress upon the case the combined features of accidental and unavoidable hæmorrhage. This peculiarity of structure rendered it, perhaps, liable to an easy compromise of its uterine attachments at their weakest point, which was, in all probability, near the os uteri. Rest ordinarily favors arrest of hæmorrhage, but under these circumstances the pressure of the contents of the organ upon this attenuated portion of the placenta when in the erect position restrained the flow, precisely as the presenting part arrested it when labor fairly began; hence the greater loss of blood at night, when this pressure was diminished or removed.

ART. III.—REPORT OF A VERY FATAL FORM OF DISEASE OCCURRING IN BLACK SWAMP, DALLAS COUNTY, ALA., WITH AN ACCOUNT OF AN AUTOPSY. Reported by BENJ. H. RIGGS, M. D., Selma, Ala.

I avail myself of your popular journal to call the attention of

your readers to a remarkably fatal series of cases that have occurred within the last ten days at the farm of Mr. John McIlvain, about four miles from Selma, among the colored people living there. Within this time eight persons have died, two men, two women, and four children. The history of the cases, as far as I can learn, is as follows: Without any previous disturbance or admonitory symptoms of note, the patient is seized with a chilliness, which increases to an aggravated ordinary chill, passing into congestion, coma, and death in from eight to twenty hours. Dr. C. D. Parke, the usual medical attendant, saw three of these cases in the confirmed stage shortly before death; the others died before he could reach them. This is about what he states to be a typical case: Patient stupid or intellect wandering at intervals; answers when loudly called; pupils somewhat contracted; no rigidity of the dorsal or post-cervical muscles; no spasms as a rule; slight in one case however; feet and hands cold; skin of extremities high up and of body warm and relaxed, and bathed with warm perspiration; respiration fifty-two, labored and much mucous rales; pulse weak and increased in frequency; tongue not very heavily coated; not much thirst. Dr. Parke invited Dr. H. S. Hudson, Dr. J. S. Peterson, and myself, to go out on Saturday, April 1st, to make an autopsy of the body of a middle-aged negro woman; this woman was taken sick on Friday afternoon, and was dead at 3 o'clock Saturday morning; she, her husband, and three of their children, all living in the same house, were the first taken—all died. To illustrate how sudden in its onset and rapid in its course is the disease, I will give the following statement: We dined with Mr. McIlvain, after the *post mortem*, at about 3 o'clock P. M.; we observed a well-developed, robust, young black woman waiting on us around the table; she was taken sick as above an hour or two afterwards—say, 5 P. M. of the same afternoon, and was dead before next morning's sun was up. An old, healthy-looking mulatto man, turning gray from age, assisted us in the examination; in fact, he loaned us his hand-saw to aid us in making section of the skull; he also was dead before next morn-

ing. Before next morning, also a child living in another house from the infected locality, as did the house-girl also, was moribund, and died since, making the eighth case. Mr. McIlvain had a slight seizure the same fatal afternoon (Saturday) like the others, but under timely assistance, vigorous stimulants, and revulsives, was relieved.

Autopsy: Made nine hours after death. Dr. Peterson, the junior member of our party, deserves credit for cheerfully and zealously doing the most of the work. Rigor mortis not great; body not very cold; expression of countenance placid and natural; plumpness good; no shrinking or shriveling of skin or muscles; pupils not much dilated; abdomen not distended. In turning the body partially on the side and drawing up the head, a quantity of slimy, pea-green fluid ran out of the stomach *per orem*. We removed the calvarium and examined the brain; there was no evidence of inflammation; the membranes were natural; the brain was normal in consistence, color, and the quantity of its fluids, except there was a slight excess in the quantity of dark blood contained in its sinuses. The spinal cord—the medulla spinalis and theca—was not perceptibly abnormal. The spleen was dense and hypertrophied. The lower lobe of the left lung was of a dark slate-red color, and filled with a frothy mucus or serum; the greater part of the upper lobe of this lung was in the same state, but not to such a degree; the lower and middle lobes and lower part of the upper lobe of the right lung were congested, mottled, and irregular on the surface, and filled with a crepitating fluid; the upper part of the upper lobe of this lung looked natural and healthy. Here seems to be the seat of the disease; it is a congestion, not yet an inflammation. The liver and kidneys were sound.

The question of importance is, what was the disease of which these people, all negroes, died? The farm is situated in Beach Creek Swamp, a famously malarial locality; within the last four years there has been much clearing up of undergrowth, and felling and belting of timber, and causeways built of young green timbers, which are now beginning to rot. There is also a

large pen of rotten, offensive cotton-seed in a field near by. The houses are situated on narrow ridges of land, and the surrounding low grounds are and have been through many months partially covered with water.

The Winter here has been unusually mild and wet; we have had no freeze since early in December last.

May not these cases be the explosive or "*fulminant*" form of malarial disease, in which the immediate cause of death is a congestion or drowning of the lungs? Due to the depressing or quenching effect of that poison on the great sympathetic system.

I would like to hear from the experience of others on this head. The settlement, by advice of the physicians, has been broken up; hands to return and work during the days.

P. S., April 5th—I have just learned that two more have died, in manner as above, since they moved away. Probably they carried the disease with them. This makes ten deaths. I append a note by Dr. C. D. Parke.

"I saw two cases; in one the pulse was what I would call a good pulse of ninety, until some hours before death; skin in a moist pleasant state, even to the ends of the fingers and toes. The other was cold to knees and elbows, and no pulse at wrist; in temple ninety. I saw one case in the chill, two hours after the attack, and after a careful examination thought it of a very mild type: the same impression was made on Mr. McIlvain in the commencement of the other cases. The delirium came on from six to fourteen hours after attack.

"I would also state that the answer to a *prompt* call seemed mechanical, and only existed up to five hours before death, after which they were completely comatose."

ART. IV.—OPERATIONS FOR STRICTURE AND STONE PERFORMED SIMULTANEOUSLY WITH SUCCESSFUL RESULT. By DR. DAVID CUMMINS. W. DOUGLAS MORTON, M. D., Louisville, Ky.

J. M., aged 63 years and eight months at the time of opera-

tion, contracted gonorrhœa when about 21 years of age, which left urethra stricture as a sequel. About 15 years afterwards the stricture was forcibly dilated by Dr. Bright. After this the urethral channel remained sufficiently open to admit the passage of urine without a great deal of trouble to patient until about 8 years ago, when, from some cause, the channel again contracted to such an extent as to bring about perineal abscess, which was opened by Dr. J. Flint. Through the fistulous opening left, patient passed his urine with not much trouble, until about 18 months ago. Since then up to the time of the operation he suffered almost constantly—mainly, as it was afterwards discovered, from presence of a stone in the bladder, which had not been suspected. About the first of October last, from some cause the writer did not ascertain, the fistula became obstructed to such a degree as to render the passage of urine very difficult, and ultimately to cause the formation of another abscess, which produced horrible suffering. After some days Dr. Cummins was called in and opened the abscess, before this, however, the perineal tissues involved in the abscess had become gangrenous, and soon afterwards sloughed away, leaving a large chasm in the perineal region, into which the bulb of the urethra could be seen projecting.

On the 15th of October Dr. Cummins, accompained by Drs. Leachman, Ed. Richardson, and the writer, called to perform urethrotomy. Patient was chloroformed; very readily passing under influence of the anæsthetic. Dr. Cummins then proceeded to adjust the parts for the operation, and while thus engaged had occasion to change the position of a catheter he had introduced into the bladder through the perineal opening on a previous visit, and in doing this became aware, by its click and resistence to the instrument, of the presence of a stone. He had come unprepared for lithotomy, and Drs. Leachman and Richardson volunteered to go out and look up a case of instruments, Dr. Cummins's being inaccessible at the time. In the meantime Dr. Cummins set about opening the urethra, with only one assistant to aid him in the operation and to keep the patient

under chloroform. He first cut through about an inch of completely obliterated urethra, commencing at the meatus, and by this opening passed a sound a short distance through a portion of the channel which had remained pervious, when it was arrested by another deeper stricture, commencing at a point on about the level of the pubic arch. Using the sound now as a guide, he commenced cutting forward from the posterior limit of the stricture, (about the junction of the bulbous and membranous portions). About the time of completing the division of the stricture, Dr. Richardson came in, bringing a case of vesico-vaginal fistula instruments, from which, having failed to find a lithotomy case, he hoped Dr. Cummins would find some instrument that might be of avail in removing the stone.

Having divided the posterior part of the membranous portion of the urethra and the neck of the bladder, as in lithotomy under ordinary circumstances, he now selected from the instruments at hand a pair of forceps used in manipulating the parts involved in the operation for vesico-vaginal fistula (doubtless a very good instrument for this purpose, but a very poor one indeed for extracting a stone), and seized the stone, which after several ineffectual efforts, because he could not maintain his hold on it, owing to the slipping of the forceps, he finally extracted it. The stone was nearly round, and rather over an inch in its longest diameter. Its composition was not determined.*

Although the results of this operation have not been in every respect favorable, followed as it was by a recto-vesical fistula, which, under the very unfavorable circumstances of its performance, probably by no sort of care could have been avoided, and a large opening in the perineal region caused by the great amount of tissue sloughed away, and remediable only by a plastic operation, it appears, when all things are considered, a remarkable triumph of surgery.*

The old man recovered very rapidly, and now enjoys a degree

* This paragraph is published strictly in accordance with the manuscript furnished.—ED.

of health and physical comfort unknown to him for a long time. Another point deserving notice in his case, was the happy manner in which he endured the long administration of chloroform; during the severest part of the operation he lay motionless, breathing easily and regularly, almost as in quiet, natural sleep.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—THE FUNCTION OF BICHLORIDE OF MERCURY IN THE TREATMENT OF DISEASES OF THE SKIN. By JOHN KENT SPENDER, M. D., Lond., Surgeon to the Mineral Water Hospital, and to the Eastern Dispensary, Bath.

There is a body of authenticated traditions which justifies the use of bichloride of mercury as a remedy for certain diseases of the skin. I do not mean merely as an antidote to the cutaneous manifestations of the syphilitic poison, but as a medicine for some non-syphilitic diseases, though of empiric value and of somewhat uncertain character. It is this view of the question which I wish particularly to discuss now. A sort of mysticism has long surrounded the therapœia of bichloride of mercury; and a few of its supposed mystic properties have been dignified by the trite name of *alterative*, which simply means that what was dark before, we wish to make darker still. It is a medicine which is often a beneficial harbor of refuge to the weary practitioner, who, having met with disappointments, finds a solace in prescribing what he knows little about, in the dim hope that an arrow-shot in a fog may hit the mark.

Further, the reputed potency of this medicine invests it with an august charm. Swift and deadly as a poison, its therapeutics are slow and wary; and it may be hinted that it sometimes re-

ceives credit for curing a disease whose "natural history" is to disappear in time. Administered within certain limits, its physiological properties are safe and harmless; and in very small quantities it might be given, probably for a long time, to a healthy adult without much result. Nor does it (within the same limits) readily produce the specific toxical effects of mercury, such as purging and salivation; it is rare indeed for a grown-up person, and still more rarely for a child, to suffer inconvenient or dangerous symptoms.

Now, the use of bichloride of mercury naturally divides itself into an external and internal function.

1. Externally, bichloride of mercury has a reputation as a parasiticide in the form of either lotion or ointment. Long before the pathology of Prurigo was understood, and its dependence on animal parasites recognized, the "yellow wash" was recommended by Bateman as an effectual application. Mr. Erasmus Wilson has published a formula which is now probably well known, consisting of corrosive sublimate, spirit of wine and of rosemary, in a menstruum of bitter almond emulsion. I have found this lotion of great use whenever the irritation has obviously depended upon parasitic disease; but I cannot endorse its alleged utility in allaying the itching of urticaria or any of the pure "neuroses." Dr. Waring says that a solution of bichloride of mercury (gr. xx—ʒss. ad aq. Oj.) is very beneficial in the treatment of obstinate scabies;* but iodide of potassium ointment may be pronounced safer and better, when sulphur washes and ointment have failed. Dr. Pereira quotes† an ointment composed of from gr. ½ to gr. ij. of corrosive sublimate to ʒi of lard, as an effective remedy for the "contagious porrigo" which spreads among children in schools. Fricke (as mentioned by Dr. Waring) speaks highly of the value of corrosive sublimate when dissolved in a warm bath; and French physicians used to order mercurial pediluvia to excite salivation,

* Manual of Practical Therapeutics, p. 303.

† Elements of Mat. Med. and Therapeutics, i. 863.

composed of half a grain of corrosive sublimate dissolved in a pint of water, in which a patient immersed his feet for two hours.

2. The venerable name of Baron Van Swieten will always be associated with the introduction of bichloride of mercury to internal therapeutics. He anticipated the modern doctrine, that salivation is not necessary for the cure of venereal diseases; and so he made experiments with bichloride of mercury, hoping that he might discover a preparation "that could be diluted at will, and so tried in a very small dose." Locker and Dzondi became warm advocates of the use of this mineral; and Dr. Graves was not less enthusiastic in its praise.

There cannot be any doubt of the general correctness of the dogma, that bichloride of mercury acts in a quiet, unobtrusive manner when administered with judgment, and that its use indirectly promotes the nutrition of several tissue-elements. We easily discern that better nutrition on the skin, because it is the tegumentary covering, and it is everywhere displayed to view. In this sense we understand that the medicine has a "tonic" influence, as Dr. Billing called it, paradoxical as this terminology sounds at first. Nor is it very important to demonstrate whether a dynamic change is wrought in the nervous system, or whether a poisoned "plasma" is deprived of its noxious properties.

Bichloride of mercury is much prescribed in the treatment of syphilitic diseases of the skin, and I believe that the following rule will be a competent guide to its use. The chronic, squamous Syphilides are the most amenable to its curative agency; and in children, when we doubt how far there may be a syphilitic root to a squamous disease, it is a good practice to combine arsenic with bichloride of mercury, and to give three doses daily of these medicines. Cod-liver oil may be added if the constitutional necessities of the child seem to call for it. The unquestionable syphilides, which affect the palm of the hand and the sole of the foot, are immensely benefited by bichloride of mercury. It would be too bold to say that the

so-called eczema fissum of the palm of the hand may be always (or even commonly) traceable to a syphilitic contagion; but I have found that no internal means does it so much good as a long course of the same medicine. The true "psoriasis palmaris" of scrofulous children must never be mistaken for a syphilide. Most of the syphilitic skin diseases for which bichloride of mercury is a remedy are intermediate between the secondary and tertiary phenomena. This is important to recollect, because it would be absurd to try and drive away a syphilitic febrile exanthem by mercury in any form.

The gummatous nodules of the skin and their sequential ulcers (a most characteristic lesion of tegumentary syphilis) are not cured by bichloride of mercury administered alone, but a potential energy of a wonderful kind is imparted by adding to it iodide of potassium in solution.* Note how the foul grey surface of a circular syphilitic ulcer vanishes by degrees when this medicine is regularly taken. Get a case in which serpiginous ulceration of the skin is just coming on, and prescribe the double compound of bichloride of mercury and iodide of potassium; quickly the ulcerative havoc is arrested, and a sound repair of tissue begins. Nor is this compound less successful in the management of other affections of the skin belonging to the tertiary order, and which might lead, if unchecked, to destruction of structure.

I do not often give bichloride of mercury to syphilitic children and infants. No one who is not fanatically prejudiced will deny the necessity of mercury for the healing of early cutaneous syphilis; but I have always found the *hydrargyrum cum creta* so admirably adapted for this purpose that I cannot imagine anything superior to it. In the few cases in which I have administered corrosive sublimate in very minute doses the accident of purging has happened more frequently than when

* The chemistry of the matter is shortly this: An alkaline iodide precipitates corrosive sublimate, but an iodide in excess redissolves the precipitate See Dr. Garrod's "Essentials of Mat. Med.," p. 88.

grey powder has been given, even though I usually guard both with opium.

The *rôle* of bichloride of mercury in the treatment of non-syphilitic diseases of the skin may be formularized with no less precision. The chronic varieties of urticaria are often much benefited by a long course of small doses of this medicine; in several instances I have found it more useful than arsenic or quinine. There are few therapeutic combinations more valuable than bichloride of mercury and colchicum, if the latter medicine seems to be demanded by any special diathesis. Then I advise the bichloride to be prescribed for the chronic forms of eczema whenever the neurotic element of irritation causes trouble; and for that proverbial difficulty of therapeutics, *relapsing* pemphigus, arsenic and bichloride of mercury together will sometimes succeed when the former alone has failed.

The obstinate piogenic diseases of the skin may be improved by lengthy courses of bichloride of mercury with bark or with sarsaparilla. In this way I manage to conquer some obstinate cases, especially if I can get help from the use of the Bath thermal waters, or the sulphur waters of Harrogate.

Certain examples of inveterate psoriasis may be treated with equal success in the same way, especially if they be complicated with hardening or hypertrophy of the subcutaneous connective tissue. It is in these cases that arsenic sometimes fails conspicuously to do any good; or it does far less good than a food-medicine like cod-liver oil.

Most of all do I advocate the administration of bichloride of mercury for the cure of some papular lesions of the skin. When the acute stage of lichen has cleared away, we may prescribe this medicine with much confidence for the removal of the tingling and aching of the so-called lichen urticatum. Cazenave's theory is that lichen is primarily a lesion of sensibility—a true nervous affection; but whatever quinine may be able to do, it is certain that arsenic often increases the irritation so much as to convert a chronic lichen into almost a febrile eruption, and a patient will look red, suffused, and hot. Chronic

lichen agrius is particularly relieved by bichloride of mercury; first the crop of papules disappears, then the subacute redness, and finally the thick and cracked condition of the cutis passes off. All auxiliary local measures will be resorted to by the skillful surgeon; but he will especially avoid the use of external or internal stimulants, though the diet ought to include an ample amount of all the primary elements of nutrition.

Finally, it deserves mention that small and continuous doses of bichloride of mercury form a good (though old-fashioned) treatment for acne. Nor is iron incompatible with it; on the contrary, the system may be rendered better able to bear the mercurial preparation.

The practiced therapeutist will know when to leave off the medicine, and will probably recognise the advantage of discontinuing it by degrees, or at least of administering smaller doses at the same intervals.—*Jour. Cut. Med.*

ART. II.—ALBRECHT VON GRÆFE. IN MEMORIAM. Read at the Annual Meeting of the Academy of Medicine by J. F. Noyes, M. D., Professor of Ophthalmology in the Detroit Medical College.

Mr. President,—But a few weeks ago, when the startling news was received of a sudden outbreak of a great and dreadful war in Europe, and when Berlin was in a blaze of excitement, "the scientific world was called upon to mourn the loss in that city of one of its brightest ornaments, and humanity of one of its most distinguished benefactors." The telegraph conveyed to us the sad intelligence that in Berlin, the seat of his labors, died peacefully, at his own home, Professor Albrecht Von Græfe, July 20th, at the early age of forty-three, not, however, until his fame, like that of his lamented townsman, Von Humboldt, who passed away at a ripe old age, only a few years before him, had reached every part of the civilized world.

In the imperfect sketch of his life and career, which it is my melancholy privilege, as one of his earlier pupils, of presenting to this Society on the present occasion, the time will allow of little more than an allusion to some of the more prominent or better known of his achievements and labors in the field of scientific research.

Professor Græfe was born in Berlin in the year 1828. He descended from a titled family on both sides, and inherited a liberal fortune. His father was the distinguished military surgeon and professor, Karl Freidreich Von Græfe. Losing his father at an early age, the direction of his early training and education devolved now on his highly gifted and cultured mother, Augusta Von Alton, who with deep maternal love cared for his morals in a manner worthy of such a pupil. He was put early at school under distinguished teachers, and manifested a decided taste for mathematical studies, and attained proficiency in them. Thus his mind became trained and accustomed to exact thinking, and learned to estimate the importance and value of matters of fact and the relation between cause and effect. The study of chemistry and the natural sciences found great favor with him, and these naturally, and perhaps more than anything else, conducted him to the study of medicine.

Deciding now to follow the profession of his father, he entered, at the age of fifteen, the medical department of the University of Berlin, and graduated with distinction at the age of twenty. With the view, now, of perfecting his knowledge of the theory and practice of medicine, also to prosecute some special studies, and to become acquainted with distinguished minds abroad, he determined upon visiting all the large capitals of Europe. He first visited Prague, the seat of an ancient and renowned university and school of medicine, which was at that time in the height of its success. The most distinguished practitioners and teachers were found here. Physiology and pathological anatomy had also their best representatives in Jakoch, Dietrich, and Hamernich. He soon became acquainted with the distinguished Professor Arlt, who then occupied the

chair of ophthalmology, and it was at his solicitation that Græfe turned his attention to diseases of the eye, while at the same time that warm friendship was formed between them which was life-long. From Prague he went to Vienna, and took instruction of the venerable and renowned oculist, Freidreich Jæger, then in the zenith of his fame. Next he visited Paris, and became the pupil of the German Sechel, and subsequently chief de clinic of M. Desmarres. Here was furnished him the most ample opportunities to prosecute independent investigations, and of enlarging his experience, so valuable and necessary for the specialist. He visited also England, and after making a short stay in London, Dublin, and Edinburgh, he returned home to his native city, speaking French fluently, able also to hold conversation in English, and entered at once upon his brilliant professional career as an oculist.

Græfe immediately began to use the large fortune which he had inherited, the annual income from which amounted to $25,000 (while the income from his practice reached finally the very large sum of $100,000), in establishing a hospital and clinic designed for his patients, both rich and poor. He employed young men to aid him in the investigation of disease. It was this institution that the celebrated Dr. Liebreich, now in London, from whom also we received such valuable instruction in the practical use of the ophthalmoscope, gathered the material for ophthalmoscopic observation embodied in his wonderful atlas, showing faithfully the interior of the eye as it appears in health and disease, and here, too, Dr. Schweizer, the learned physiologist, studied the microscopical appearances of this organ, normal and abnormal. For material with which to conduct his experiments and observations more extendedly, Græfe employed rabbits, and eyes of other animals, especially for giving practical instruction in the various operations upon the eye. Thus he instituted a most singular clinic, such as the world had never yet seen, a clinic of rabbits. Large basketsful of these harmless creatures were brought in and blinded, victims for the good of humanity, their poor eyes being entirely "put out

by" the varied experiments and operations made upon them.

Material for his studies and investigations continued to be richly supplied, with his rapidly augmenting renown, and patients poured in from every quarter, coming in many cases from remote countries to receive the advantages of his skill. His pupils increased rapidly. Not only students of medicine, but also experienced physicians, hastened to avail themselves of his instruction. Indeed, so unprecedented was his success, and so universally extended had become his reputation, that in a very few years students, instead of going, as formerly, to Paris and Vienna, were now flocking to the great teacher in Berlin to complete their ophthalmic studies. Fifteen years ago we found there, attending his clinics, students not only from every part of Europe, but also from North and South America, some of them occupying important positions as public teachers in universities and colleges at home.

In 1843, when only twenty-six years of age, he was elected to a professorship in the University of Berlin. The government very soon also bestowed on him the distinction of privy councilor, while other high marks of consideration constantly accompanied his progress. It may be doubted whether, in the history of medical men, another instance may be found of one so young elevated to so high a position, and so short a time attaining such universal and deserved celebrity.

In 1854 he founded, and in conjunction with Arlt (now professor in the University of Vienna) and the renowned Professor Donders, of Utrecht, edited the semi-annual magazine known as the "Archive," which has continued to the present day, now numbering on the shelves of the library sixteen octavo volumes, the first of which being almost entirely filled by contributions from his pen. Collected in this magazine may be at once seen the vastness of his research and literary labors. Those ample volumes contain the discoveries and investigations which have rescued ophthalmology from its former position as a department of surgery merely, and elevated it to the rank of an independent science. The first treatise among his numerous contribu-

tions in the "Archive" is upon the physiology and pathology of squint. The operation for the cure of this deformity, first suggested by Stromeyer, and carried into practice by Deifenbach, of Berlin, more than a quarter of a century ago, on account of a want of thorough knowledge of the theoretical part of the subject, and worse than failures, which had so frequently followed, had justly fallen into almost complete disrepute. Graefe, by means of a series of exhaustive investigations, devised and pointed out the requisite and proper treatment of strabismus, as also of muscular paralysis and insufficiency; and we are chiefly indebted to him for having extricated the treatment from the obloquy with which it had been rightfully visited, and for having rendered the operation for its relief one of the most satisfactory in surgery.

The ophthalmoscope had been but a short time discovered or invented (1851), by the eminent and learned doctor and philosopher, Prof. Herman Helmholtz, a discovery which has been the means, I need hardly say, of revolutionizing entirely ophthalmic medicine. Before the discovery of this instrument, no one had a clear idea of the appearance of the interior of the living human eye in health, much less in disease, consequently the treatment of intra-ocular diseases must have depended wholly upon guess or inference. Von Graefe was among the first to use this instrument, and soon, by his untiring labor and industry, acquired an ability to diagnosticate internal diseases of the eye unsurpassed. In order to learn and verify what tissues were effected in the morbid and abnormal appearances observed, most careful *post-mortem* examinations were conducted, and blind eyes, when incurable, were also sometimes removed and carefully dissected and examined by the microscope. In this way, by most patient study and investigation, the ability was gradually gained to perceive early and correctly, to judge of intra-ocular morbid changes by objective symptoms, and by degrees the means of curing diseases of the eye regarded heretofore incurable. He pointed out by this means, the influence sclero-choroiditis and its results, staphyloma, has on myopia.

It was in 1856, while I was then a student of his, that he discovered the seat and nature of glaucoma, and first performed iridectomy for its relief, a disease as lamentably prevalent as it was formerly universally fatal to the vision. This was, perhaps, his crowning glory, and is of itself sufficient to immortalize his name. I may mention in this connection that, having repeatedly witnessed the operation performed by him, and the resulting cures, on my return home I had the satisfaction of performing my first operation for glaucoma (August 15, 1857), it being by several years earlier than any case on record in this country.

The pathology of cataract, and the different methods of surgical treatment then in vogue, now engaged his close attention, and which resulted finally in his devising and perfecting, by his inventive skill, the operation for extraction, called the modified linear or peripheric operation, which is now universally conceded to offer the best chances of success.

The amount of physical and mental labor which Græfe daily performed was incomprehensible. It was this that brought him to an early grave.

Before disease had rendered it impossible, he was at his desk at seven in the morning, answering letters, writing for his "Archive," or engaged in study. At nine came his lecture at his private hospital, alternating with a clinical conference, at which patients were brought forward and their cases discussed. Then came his visit at the large charity hospital, his round in the city, a hasty dinner, often snatched in his carriage at 2 P. M.; his operations, sometimes twenty or thirty in number, and embracing every variety of ophthalmic surgery. The polyklinic followed, at which from one to two hundred poor patients were admitted and prescribed for, and, if necessary, and space permitted, retained in the hospital for treatment. A hasty visit through the wards of his extensive establishment, and then he drove rapidly home to hold his own private office hours. These commenced at seven in the evening, and would last till late in the night, from fifty to seventy-five being often prescribed for. When they were gone, Græfe would return to his scientific

labors, interrupted in the morning, and continue them till forced to seek repose. It is remarkable that with such restless activity, a frame, naturally delicate and severely shattered by an attack of pleurisy ten years ago, during which his life was more than once despaired of, should have held out so long. A phthisical tendency, long suspected, developed itself during the year 1869 with startling rapidity. He was compelled finally to abandon his lectures at the commencement of the summer of 1869 for the purpose of seeking another climate. Late in the autumn of 1869 he returned to Berlin, and for a time carried on his usual labors with a portion of his former energy. Called in consultation to Vienna in the course of the winter, the stairways and waiting rooms of his hotel were blocked with patients, who had heard of his sudden arrival, and sought to avail themselves of his skill. On his return to Berlin he steadily failed, but insisted on working to the end. An operation of importance demanded his attention. He was lifted from his carriage, carried in a chair to the bedside, and then with a trembling hand treated his last patient. It was his final visit to the hospital. He lost ground daily, and lingered on through the spring and early summer, and at 3 o'clock on the morning of July 20th, 1870, passed quietly away. Græfe's personal appearance was most striking. Tall and thin, slightly bent forward, his long flowing hair streaked with gray, his features finely cut and regular, his expression full of vivacity and intelligence, he never failed to impress the beholder with the feeling that he was in 'the presence of a man of rank and wonderful genius.' His movements were quick and nervous, his walk rapid, almost running, and his whole bearing that of an earnest, faithful worker, determined to do all he could while life, which he seemed to realize would be short, remained. His voice was soft and pleasant, and when lecturing, he often spoke with great fluency, but always with wonderful simplicity, clearness and beauty. His beneficence was unbounded. Not only his personal dependents, but the poor generally, were the recipients of an unstinted liberality. Often he received cataract patients, devoid of means, into the

hospital, and maintained them at his own expense, provided them with glasses after the operation, and furnished them with a passage home. I have myself often seen him, in a manner not to attract attention, give them money from his own pocket for this purpose. A large portion of his princely income was thus bestowed in charity. He was naturally gay and cheerful, and responded, when possible, to every call, making no distinctions between the poor and rich. The people of Berlin idolized the man; none spoke of him but with praise, and the world will unite with them in their testimony to the simplicity of his nature, the nobility of his character and the superiority of his intellect.

The following account of his funeral is from the pen of Dr. Richard H. Derby, of Boston, a pupil of his, who was in Berlin at the time:

"Saturday evening was his funeral, and I remained so long in Berlin to see the last honors tendered to my dear teacher and friend. All Berlin seemed to forget for the time the anxious thoughts that filled every one's mind of impending war. The Victoria Strasse, where Græfe lived, all the neighboring streets, wherever there was standing room, were filled with deputations from the city. Students with corps and banners, equipages from the court, with footmen in royal livery. The funeral cortege was one of the largest I ever saw. The house was reached with difficulty, so dense was the crowd. All the halls were filled; finally, we entered the room where all that was mortal of Græfe lay. The coffin was covered with white flowers and immortelles. At one end rested a silk cushion, covered with decorations and orders conferred at different times upon Græfe. One of the last from the Emperor of Russia, given on the occasion of his last visit to Berlin. (He sent this the morning after his arrival, with the remark that it was not alone for the services that he had rendered the Russian royal family, but that every university in the kingdom was supplied with a pupil of Græfe's.) In the semicircle about the catafalque stood Græfe's wife and the three little children and

his sister, the faculty of the university, chamberlain from the court, and those who had known and loved him. A funeral oration was pronounced, and a hymn sung by a choir of men. It was a sad moment. The young wife could hardly have felt more lonely than those of us who were not united by family ties with him. I learned to regard Græfe as something superhuman, in comparison with whom other men seemed mere pigmies. How often, in the last few months, amid the anxieties and responsibilities of my position at the clinique have I gone to the Professor for advice, and how did every difficulty seem to fade away with his assistance? Thank Heaven that it was my fortune to have seen so much of Græfe during the last year; it has been an experience worth all my other years of study."—*Detroit Review of Medicine.*

ART. III.—THE INTRA-ABDOMINAL DOUCHE IN SEPTICÆMIA. By JOSEPH W. THOMPSON, M. D., Paducah, Ky. [Communicated to the Society, and read July 5, 1870.]

On the 8th of January last, in connection with Dr. H. M. Gilson, of this city, I was called to see Annie Smith, colored, aged twenty-five years old. We found her abdomen very much distended, and her health very feeble. There was decided dullness on percussion, with perceptible fluctuation. Four days later, in consultation with Drs. R. Saunders and H. M. Gilson, of this place, and W. Gardner, of Cave City, Ky., I made a minute examination, exploring the cavity of the womb, and found it contained nothing.

Still being in doubt as to the cause of the enlargement, we decided to explore it by abdominal tapping. I accordingly introduced a trocar, and drew off about two and a half gallons of pus. I then inserted a tent into the opening and enveloped the abdomen with flannel, which was confined with a broad

roller. The next day I drew off a large wash-pan full of pus. On the second day from that time I drew off the same wash-pan full and a half. On the 17th, two days from the last treatment, we washed the peritoneal cavity by injecting a half-gallon of warm water. On the 20th, I injected two gallons of warm water into the peritoneal cavity, and followed it by a solution of carbolic acid, five grains to two pints of warm water. We continued to inject the peritoneal cavity every second day with warm water, following it by warm solutions of carbolic acid, which was increased from five to ten grains to the same amount of water at each treatment, until the 30th of that month. On the 30th the strength of the solution was forty grains to two pints of warm water.

That night the tent was dislodged, and at my next visit I endeavored to introduce the canula to inject the cavity as before; but the internal portion of the opening had so much closed that I was unable to pass it. There was then so little distention that we thought it would be hazardous to make another opening with a trocar, for fear of doing violence to some of the abdominal viscera. The discharge diminished rather promptly under the use of the injections. At the last two or three treatments it consisted principally of disintegrated matter.

The history is briefly this: In August last, at her menstrual period, during a rather cool night for that season, the patient retired to sleep, not protected by a bed-cover, and on awakening the next morning she discovered that the catamenial flow was entirely suppressed. For some time, she cannot state how long, the pain in the abdomen was severe, and in a few weeks the enlargement commenced, and continued to increase until I tapped her, as I have before stated. She was very greatly relieved of her suffering by the first evacuation of pus. It is my opinion that the disease was chronic peritonitis, the result of exposure to the cold that night, during the menstrual flow, which acted so powerfully as to suddenly suppress the discharge.

It is regarded as hazardous to inject the peritoneal cavity. Professor T. G. Thomas, of New York, in the second edition of his excellent work "On the Diseases of Women," states that "after evacuation the sac should not be injected, for fear of exciting peritonitis;" but in this case no peritonitis or any other unpleasant symptoms were excited, but on the contrary the patient was evidently benefited by the use of the injections.

The principal point of interest in the case is, that the peritoneal cavity did bear copious injections of warm water, and a solution of carbolic acid, without producing any undue excitement or bad results. It is possible that, had the injections been more timely used and the patient situated with proper surroundings, such as good diet, nursing, and well-regulated hygienic influences, she might have been very greatly benefited. During her entire illness she lived in a little shanty of a house, possessing no comforts. I requested the city authorities to send her to the hospital; but my efforts in that direction were in vain. It is evident that her life has been prolonged and her condition made more comfortable by injecting the peritoneal cavity, even under these circumstances. She is still living, though very feeble.

I am especially indebted to Dr. Gardner for his valuable assistance in the case.—*Gynæcol. Journal.*

Art. IV.—Progress of Medical Science.

In proof of the progress in practical medicine, I may refer to improvements in relation to particular diseases. Consumption (for example), a disease in which the physician's duty consisted in watching the slow "gradations of decay" (making a prognosis of two year's duration), and alleviating suffering as best he could. But now, under the use of cod-liver oil, mineral acids, bitters and supporting nourishment, he no longer regards the disease as hopeless, and treats it looking for a cure; failing

that, he confidently expects to prolong life. The experience and calculations of Dr. Williams justify the expectation, for he informs us that the average duration of life of phthisical patients has been extended from two years, the limit assigned by Laennec and Louis, to eight years. And he adds, that "in not very few cases the disease is so permanently arrested that it may be called *cured*." I may mention the treatment of oxaluria, phosphatic, and other diatheses indicated by the state of the urine, the use of iodine in goitre and other affections, iodide of potas in syphilis, gout, etc., bromide of potas in epilepsy, etc., arsenic in many affections of the skin, the alkaline treatment of rheumatism, the successful use of nitrate of amyl in tetanus, and in angina pectoris, of hydrate of chloral as a narcotic, of quinine in acute lumbago, of drachm doses of tincture of henbane, with a little sulphate of magnesia three times a day in orchitis, of large doses of quinine in military surgery as a remedy for pyæmia; the banishment of scorbutus from our ships, etc., etc., also the vast improvement that has taken place of late years in the treatment of diseases of the womb and its appendages, and in diseases of the eye, I may refer to the use of atropia as a substitute for belladonna, and the calabar bean as a local application to contract the pupil.

Formerly all infantile diseases were considered by some as the results of febrile action, and treated as such, by others as the results of weakness, and treated with tonics and stimulants, and by a third class as the results of the irritation of worms, and treated with anthelmintics. Modern investigators have proved that the different organs of the child are liable to nearly the same diseases as the adult, and should be treated accordingly.

The mortality of infants is still very large, but of late years it has greatly decreased. Towards the middle of the last century 60 out of every 100 children born in London died before they had reached their first year of age; but the mortality has steadily diminished, so that now about 35 in every 100 die at that period. About 600,000 are born annually in Great Bri-

tain; of these 300,000 would have perished. Now about 200,000 die, thus showing a saving of at least 100,000 human beings a year. In New York the mortality is still very large; *one-third* of the children born die in the first year, and one-half before they have attained their fifth year of age. In Geneva records have been kept since 1590, and it has been ascertained that a child has now five times greater chance of living to the age of twenty-one years than it had three centuries ago.

About the middle of the seventeenth century, 1 in every 40 or 50 women delivered in London died of child-birth and its consequences; but as medical science has advanced, that mortality has decreased, till now about 1 in 150 or 200 die. There are about 600,000 accouchements yearly in Great Britain, still about 3,000 mothers perish. If the old mortality held good, not less than 11,000 or 12,000 maternal lives would now be lost. Consequently we may proudly point to this modern advancement in medical science, effecting, as it does, in this item alone, a saving of the lives of 7,000 or 8,000 mothers a year.

The mortality in the army, years ago, was immense. It was a disgrace to those in authority who positively refused to listen to the repeated appeals of the medical staff. And it was not till after the Crimean war, when Miss Nightingale brought the fact before the nation, that the laws which preventive medicine had established and applied in civil life were put in force. The result was that since the period named, the mortality in the Guards has fallen from 20 to 9, and in the infantry from 18 to 8. And the improvement in war is still more striking. In the Crimean war the sick in hospital were nearly seven times the number of the killed; while in the Chinese war they were nearly equal. The relative proportions of zymotic sickness in the two campaigns were as 6 to 60.

The present death rate of fever in England amounts to 385 per 10,000 of population, while a century ago its death rate was nearly 539, and at the middle of the last century the annual death rate from all causes in London, was 355 per 10,000 of population, but in the middle of the present century, it was only

249. In Sweden, in the period from 1755 to 1775, the death rate was 289 per 10,000 of population, while from 1841 to 1850 it was reduced to 205.

In pursuing this subject let us contrast the state of the unfortunate lunatic of the present day with what it was sixty years ago, when deemed incapable of human feelings he was incarcerated in a dungeon, bound with chains, surrounded by filth, cut off from the friendship and charity of his fellow-mortals, and treated with contumely, scorn and stripes, a human being buried, yet living. Need I say to you how changed all this is now, and with what happy results? With the knowledge that the poor sufferer possesses the feelings, impulses and affections of man, he is surrounded by comfort, all restraint is, or should be removed; and he is put under proper medical and moral management.

The preservation of human health, and the prolongation of human life, are two of the great and noble objects of practical medicine. These objects are to be attained more by the prevention of disease than by its cure. But to enable us to prevent diseases, we should be well acquainted with their causes. These causes and the best means of avoiding them, have in a special manner engaged the attention of the physician of modern days. By it he has learned the vast importance of sanitary measures. His investigations have taught him that the attacks of almost all diseases are increased in intensity and frequency, in our households and communities, by the want of sufficient air, light, water and drainage, as well as by the deleterious effects of decomposing animal and vegetable matters allowed to remain within and around our dwellings, and by the human effluvia concentrated in small and stifling bedrooms. They have taught him also that when the preceding causes of disease have been abated, in special localities, by proper sanitary arrangements, human life as a consequence has been saved, misery avoided, and pauperism prevented.

We find the mortality in country districts always less than in towns. In the country districts of England, it is about 1 in 58,

while in towns it seldom falls below 1 in 45. In all large towns where proper sanitary measures have been adopted the mortality has decreased. For example in London, in 1840, the death rate was 1 in 40, it is now 1 in 45; so in Boston, in 1855, it was 1 in 39, it is now 1 in 41.

As a further proof of the influence of sanitary measures upon certain localities in towns, I may mention that St. Giles, in London, formerly a filthy parish, now since every street and court has been brought under control, the mortality has been reduced from 50 in 1,000 to 15 in 1,000.

Class and occupation exercise their influence upon mortality, for we are told by Dr. Lyon Playfair that in Liverpool the average age at death of the gentry was 43 years, tradesmen 19, and laborers 16, the average age of all classes being 22 years.

In pursuing this subject I may mention that it is estimated that there are 8,000 preventable deaths in New York, yearly. It is further estimated that for every death there are 27 cases of sickness, which would give a total of 216,000 cases of preventable sickness to be treated. When we reflect upon the misery, wretchedness and pauperism produced by these 216,000 cases of sickness capable of being prevented, it affords ample occupation for the physician, the philanthropist and the statesman.

Let us look at one other advancement of practical medicine, one to which the physician may proudly point as the greatest discovery of the age, a victory of medicine over disease and death. I allude to the discovery of vaccination by Jenner, to whom Providence, as it were, entrusted the office of teaching the surgeon, with an almost invisible speck of matter upon the point of his lancet, to defy, in a measure, one of the most fatal diseases that ever afflicted the human race.

The vast importance of this discovery can only be appreciated when we take into consideration the ravages produced by small pox prior to the introduction of vaccination. We are told that this disease was a terror to mankind, "sweeping over the land like fire over the prairies, smiting down prince and peasant;" that about the year 1519 in Mexico, it suddenly carried off 3½

millions of population; that in Brazil in the year 1563 it extirpated whole races of human beings; that about the same period in the single province of Quito, it destroyed 100,000 Indians; that in Iceland in 1707, it carried off 18,000 out of a population of 50,000; that in Greenland in 1737, nearly two-thirds of the population were swept away by it; that in France it caused one-tenth of all deaths, and in England one-fourteenth; that the annual mortality from it in Europe alone amounted to half a million; that one-third of those attacked died, and that it destroyed, maimed or disfigured one-fourth of mankind.

Let us now look at the pleasing side of the picture, and see what the mortality from this loathsome disease is at present. The following illustrations selected from various sources, give an approximative idea of the mortality from small-pox in each million of the population before and since the introduction of vaccination:

Sweden - - - - -	2050	185	Copenhagen - - -	3128	286
Westphalia - - -	2643	114	Berlin - - - - - -	3422	176
Moravia - - - - -	5402	255	England - - - - -	3000	200

Doctor Farr tells us that the combined mortality of small-pox, measles and scarlatina at present, is only half as great as the mortality occasioned by small-pox alone before the introduction of vaccination.

Experience and statistics teach us that small-pox occasionally occurs among those who have been vaccinated; that if 1,000 persons who have been *well* vaccinated should be exposed to the contagion of the disease, about twenty-six will take it; that among vaccinated persons infected with small-pox, the danger of the disease is chiefly determined by the badness and insufficiency of their vaccination; that the fatality of small-pox when it attacks the *unvaccinated* is 350 per 1,000; that its fatality to such *vaccinated* persons as it infects is, taking them indiscriminately, 70 per 1,000, but, distinguishing vaccinated persons into two classes, first, those who have been vaccinated in the best known manner, and second, those who have been badly vaccinated, the fatality of small-pox, if it infects the former, will be 5 per 1,000, if it infects the latter, 150 per 1,000; and that

the risk of the one is 30 times that of the other. Or, in other words, let an unvaccinated person contract small-pox, and the chances are more than *one in three* that he dies. Let a very badly vaccinated person—a person with one imperfect cicatrix—contract small-pox and the chances are not quite *one in eight* that he dies. Let a person with two good vaccine cicatrices have small-pox, and his chances of dying are less than *one in forty*. But persons who have been vaccinated in the best and most complete way, will, if they ever get small-pox afterwards, not die of it at the rate of much more than *one in two hundred*.

It may be safely asserted that the lancet of Jenner, armed with the cow-pox matter, has saved in the world more human lives than gunpowder and the sword were ever successful in slaying, during any century in the history of mankind. And let us say, honor to the man who found the way to arrest this dreadful scourge, and who taught us that the seeds of the disease transferred to another soil might be made to germinate with a healthy and saving influence—a glory to our art, and to the nation claiming him as a son. Yet that nation neglected to bestow any mark of distinction upon the doer of all this good. Such favors being reserved for the inventor of instruments for the destruction of human life—the user of them—the courtier and the politician; the man whose life is spent in ministering to the suffering of his fellow-man, however successfully, being generally the last to receive such honors.

It is to be regretted that notwithstanding the facts before us, men are to be found ignorant and weak-minded enough to deny the benefits of this wonderful agent. And we hear of "*anti-vaccination societies*," composed, I am happy to say, with very few exceptions, of men not belonging to the profession; men whose prejudices must have destroyed any reasoning power they might have possessed.

According to Short's mortality bills of London, plague, dysentery, small-pox, ague and child-birth were the most destructive diseases in the time of Sydenham. It is needless for me to say that they sustain their formidable and fatal character no longer.—*Canada Medical Journal.*

ART. V.—CARBONATE OF AMMONIA IN THE TREATMENT OF PNEUMONITIS.

By A. PATTON, M. D., of Vincennes, Ind.

Carbonate of ammonia has long been used in pneumonitis to fulfil certain special indications in the advanced stages of the disease, under the supposition that its value depended upon its stimulant properties, sustaining the vital forces in cases where there was extreme prostration, or aiding expectoration by giving tone and strength to the respiratory organs. But I am convinced that this application of the remedy, in pneumonitis, is far too limited, and that its stimulant properties constitute but a very small proportion of its remedial value.

My attention was first directed to this medicine, as a remedy in all the stages of pneumonitis, during the winter of 1862, when in charge of a large number of cases of the disease, and placed in a situation where it was impossible to procure such medicines as I desired. Ammonia was employed, not upon theoretical considerations, or because it was supposed to be the best remedy, but for the want of a better. Thirteen well-marked and very severe cases of pneumonitis were placed upon carbonate of ammonia from the first day of the attack, and submitted to treatment by this medicine exclusively, with the exception of counter-irritation in several of the cases. In many of the cases there were high febrile excitement, severe pain in the region of the inflamed lung, sputa very tenacious and rust-colored, and crepitant rale distinct in every case, with more or less severe dyspnœa in ten of the cases. In two, double pneumonitis existed.

The effect of the medicines was most carefully observed both by myself and assistant, and to my agreeable surprise, I observed that, instead of increasing the febrile excitement and heat of surface, both were greatly reduced in a very short time. The pulse became less frequent, but full and strong, the skin moist, and temperature reduced. The pain in the region of the suffering lung was promptly diminished in all the cases. But its most strikingly beneficial effect was upon the character and

frequency of the respirations, the dyspnœa being relieved and the respirations rendered easy, full, regular, and decidedly less frequent.

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I respectfully ask physicians everywhere to give this remedy a fair trial, and report results through the medical journals, for if I have placed two high an estimate on its remedial value, in pneumonitis, the sooner I am convinced of my error the better. I do not claim to be the first to employ this agent in pneumonitis; many others allude to the remedy in the highest praise, but they all advise it as an auxiliary to other measures, and recommend it mainly as a stimulant. True, Dr. Flint advises its employment to prevent heart-clot, and gives it throughout the disease. Dr. Styles employs it in large doses, but at what stage of the disease I am not informed. Many physicians in the West use hydrochlorate of ammonia to promote absorption of the exudation, but for no other object, as I understand. Some writers contend that the carbonate of ammonia is decomposed in the stomach, and assumes the form of hydrochlorate, by the action of hydrochloric acid. This may be true, but it should not cause us to substitute the hydrochlorate for the carbonate, as I have found the effects of the two preparations very different in pneumonitis, as well as in other diseases.—*American Journal Medical Science.*

ART. VI.—SOME REMARKS UPON CASES OF OBSTRUCTION OF THE BOWELS, IN WHICH SURGICAL MEANS WERE USED. By A. REEVES JACKSON, M. D., Chicago, Ill.

Strangulation of Ileum by a Band of Adhesion—Puncture of Intestine—Gastrotomy—Recovery.—The patient was a woman aged twenty-eight years. She had been married four years, but had never borne children. Menstruation commenced at thirteen, and had always been painfully performed. During the preceding fifteen months she had suffered from occa-

sional attacks of apparently causeless constipation, accompanied by colicky pains, and followed by diarrhœa. Sometimes during these painful seizures she had experienced a degree of relief by getting upon her elbows and knees. At first these attacks were separated by an interval of six to eight weeks, but latterly, that is to say, within the past four or five months they had become more frequent, the interval between some of them not exceeding two weeks. Besides, during the past ten months she had been suffering from a cough, which had become more and more troublesome, and in that period had had two slight attacks of hæmoptysis. Still she kept up, and was able to do ordinary household work.

The present illness had commenced on the morning of October 2, 1859, with sharp pain in the left iliac region, which was attributed to the ingestion of some improper article of diet. The pain was more constant than it had been on any previous occasion, and was increased by pressure. Without advice she had taken a full dose of some purgative pills, and finding them ineffectual, at the end of five hours the dose was repeated. As these also failed to produce the desired effect, an ounce of castor oil was taken, and immediately vomited. From this time forward almost everything was returned that was taken into the stomach. The pain increased in severity, and was no longer confined to the spot in which it originated, but extended upward, and into the right side. The abdomen became swollen and its walls tense. A physician being called at this stage of the case, prescribed a turpentine enema, which brought away a small quantity of dark-brown fæces, without relief to the symptoms. A second enema of warm water was then administered, but it came away in a few minutes unchanged. There being no facilities for giving a warm bath, the patient was then wrapped in blankets wrung out of warm water, and a teaspoonful of laudanum administered. This was retained nearly half an hour, and was then vomited, together with a draught of water, which she had imprudently taken. The dose of laudanum was repeated, and this time retained. The patient now

became easier, and was drowsy. A purgative enema, consisting of an infusion of senna with sulphate of magnesia, was then given, and firm pressure made against the anus to prevent its return. Its pressure produced so much pain, however, that it was permitted to escape. All active treatment was now suspended. The patient was kept under the influence of opium, while small quantities of beef-tea and brandy were given from time to time.

I saw her October 4th, the third day of her illness. At this time she was in a state of semi-consciousness, and almost unable to speak. Her extremities were cold; pulse small, feeble, and rapid. Nausea and ineffectual retching were constant. The stomach had not retained anything during the past twelve hours. Her face, bathed in cold sweat, was pale and haggard, and its expression denoted that life was fast ebbing. The abdomen was enormously distended, and the writhing of the enlarged coils of intestine could be distinctly seen through the walls which enclosed them. The rectum was empty and contracted. I was informed that the urine had been scanty, high-colored, and voided without difficulty.

With scarcely a hope of doing more than giving temporary relief, I introduced a small exploring trocar and canula through the walls of the abdomen, at a prominent point, into the distended bowel. This gave immediate exit to a large quantity of flatus, and the abdominal fullness rapidly subsided. Flannels, saturated with a hot infusion of hops, were applied so as to envelop the entire abdomen; sinapisms to the calves of the legs and epigastrium; and a teaspoonful of brandy, with a fourth of a grain of morph. sulph. were administered. The patient had become somewhat aroused, and expressed a sense of relief. A stomach-tube was now passed into the colon and a large quantity of beef-tea very gradually injected, but, despite every effort to prevent its return, it was expelled almost immediately. At the same time the patient vomited the brandy, and this was followed by eructations having a decidedly stercoraceous odor, although there was no fæcal matter thrown up. The tympan-

ites returned also, and in an hour the abdomen appeared as large and resonant as it had been prior to the puncture.

I now proposed opening the abdomen, in the forlorn hope that something might yet be done to overcome the obstruction which evidently existed, and the operation was decided upon.

Commencing a little below the umbilicus, an incision was made in the linea alba, and continued directly downwards three inches. On opening the abdominal cavity the omentum was brought into view, its lower edge being forced through the incision by the pressure of the distended bowel. The cut was now lengthened about an inch, when a large coil of intestine, very greatly congested, protruded through the wound. Taking hold of this, I commenced the work of tracing up the point of obstruction. This was soon accomplished. Making gentle traction upon the bowel, I found that it could not be drawn from behind the omentum, and upon raising the latter upward and passing a finger beneath it, the cause was apparent. It consisted of a band of lymph, about two inches in length and nearly half an inch in width, extending from the posterior free surface of the omentum to the lower side of the tranverse colon, forming a triangular space between these parts. A fold or loop of the ileum had insinuated itself through the opening thus formed, and becoming enlarged and congested, was unable to return. The band, which was tolerably firm in texture, was ruptured by the fingers, and the strangulated bowel freed. The portion which had thus been strictured was of a dark purplish color, while marks of incipient inflammation of the peritoneal investment of the small intestine above this point were everywhere present. I had the satisfaction of observing a very great change take place in the appearance of the liberated bowel before closing the wound. It became immediately filled with flatus, now able to pass onward, and its color changed from purple to dark red. I searched for and found the spot which had been punctured by the trocar. It was about fifteen inches above the point of strangulation. It formed the centre of a

deep red space nearly an inch in diameter. The opening was no longer perceptible, and I was unable to discover the escape through it of either gas or fluid. I removed the whole of the adventitious band which caused the obstruction, and then, after carefully replacing the parts, closed the wound with four points of twisted suture. A flannel compress dipped in warm water was applied over the wound, and confined by means of a flannel binder loosely pinned. During the time this was being done, large quantities of gas escaped per anum, and they were soon followed by a copious discharge of fluid fæces. Strict rest was enjoined, and a full dose of opium given.

The wound healed well, but the operation was followed by an attack of peritonitis, which was treated by opium, quinine, and a concentrated nourishing diet, and from which she slowly recovered. Nearly five weeks elapsed before she could be considered fairly convalescent.

This patient died of phthisis pulmonalis, in September, 1860, eleven months after the operation.—*Chicago Medical Journal.*

ART. VII.—SULPHATE OF QUININE IN THE TREATMENT OF SPONTANEOUS ERYSIPELAS. By DR. PERROUD, Physician to the Hotel Dieu de Lyon. Translated from Annales de Dermatol. et de Syphilig., Deuxieme Annee, No. 4, by JAMES C. WHITE, M. D., Boston.

It is not the tonic, neurosthenic action of sulphate of quinine, nor its anti-periodic action that we have desired to take advantage of in the following experiments, but certain properties it possesses with regard to the globules of the blood, which have been the subject of interesting investigations. These investigations, as well as the researches lately made in connection with the erysipelatous process, have served us as a guide; and inasmuch as they have determined our therapeutics, it is necessary that we should recall them in a few words.

Two years ago M. Vulpian, after Koster, Volkmann and

Steudener, announced the presence of a great quantity of white blood corpuscles infiltrated throughout the skin of parts affected by erysipelas. This observation was soon confirmed, and it appears to be demonstrated to-day that the infiltration of the skin by a great quantity of leucocytes forms one of the principal elements of the erysipelatous process, and that to this is to be attributed, in great part, the swelling of the affected parts. It appears to be shown also that these leucocytes may be rapidly reabsorbed and disappear, for they are not to be found two or three days after the disappearance of the swelling; moreover, it may be regarded as probable that these elements have not been formed in the parts thus affected, but that they have penetrated thither by emigration through the walls of the vessels.

This last opinion is not incontestably admitted, we know, for many observers, among them K. Balogh, in Germany, and Feltz, in France, deny this emigration, because they have not been fortunate enough to witness it, but their negative observations are too few to weaken positive results, which are already numerous.

Without pretending to give a complete account, it will be remembered that in 1846 M. Waller, of London, announced in the "Philosophical Magazine" that he had seen the white corpuscles of the blood pass through the walls of the vessels where no previous rupture existed. This observation remained unnoticed until within the last few years Cohnheim, in Berlin, Stricker, Prussach, in Vienna, and others, have investigated the subject, and arrived at the same conclusions. Other observers, too, have confirmed the results obtained by these German microscopists. Among French physicians may be mentioned Flayem and Vulpian, and before them Lortet and Rauvier, the first of whom demonstrated that the white corpuscles are able to traverse animal membranes (the swimming bladder of fishes), and second, that they were able to gain entrance within the pith of the elder and its cells, and that it is even possible at times to determine their presence within epithelial cells, whither they have penetrated.

It appears to be proved, then, that leucocytes may emigrate without previous rupture of the capillaries, and it is extremely probable, as we have above stated, that this emigration constitutes one of the principal elements of the erysipelatous process. On the other hand, M. Lortet has taught us that the amœboid movements of the white corpuscles of the blood are necessary to their penetration through the tissues; that a young and healthy pus easily emigrates; that an old pus, the leucocytes of which are sick or dead, emigrate badly or not at all. If, then, we are able to lessen the vitality of the white corpuscles of the blood and to diminish the movements of their protoplasm by a drug, it is to be presumed that their emigration would become impossible, and that the erysipelatous process would find itself by this means blocked, or even completely arrested.

The problem reduces itself, then, to find a substance capable of destroying the amœboid movements of the leucocytes in such doses that it may not be poisonous to the patient.

M. Binz has devoted himself to this class of researches, and has studied the influence of various solutions, not only upon the vitality of infusoria, but of leucocytes held in suspension in serum, and has thus come to class the salts of quinine among the most poisonous. A solution of hydrochlorate of quinine one part in 800 immediately kills large infusoria, one part in 2,000 causes them to perish in a few minutes, and one in 20,000 in a few hours. The effect upon the white corpuscles is the same; if one adds to perfectly pure serum a drop of blood taken from an animal in full digestion, the amœboid movements may be seen to take place without hindrance; but if this experiment is repeated with serum containing 1-2,000th of hydrochlorate of quinine the movements of the white corpuscles are seen to be arrested without the least alteration in the red globules.

These data would naturally lead to the employment of quinine whenever a pathological tendency to the emigration of leucocytes exists, in a great number of inflammations for example, and especially in erysipelas. But in what dose shall it be administered?

M. Binz, without approaching the question of erysipelas, thinks that in order to arrest the progress of a suppurative peritonitis it would be necessary to give 12 to 15 grammes of hydrochlorate of quinine in twenty-four hours; but it seems to us that, in erysipelas at least, so large a dose is unnecessary. We know that a solution one part in 2,000 will at once put a stop to the acemboid movement of the leucocytes, and that one part in 20,000 will arrest it after some hours. We know, too, that the quantity of blood in a person is about one kilogramme to 10 or 13 kilogrammes of the solid parts, and consequently that a person weighing 70 kilogrammes has 7 kilogrammes of blood. A dose of quinine expressed by the fraction 7,000-2,000ths or even 7,000-20,000ths, ought then to be enough to influence the white corpuscles sufficiently and to render their emigration difficult or even impossible.

It is upon this data that we have based our administration of quinine in the dose of 30 to 40 centigrammes daily, a spoonful every half hour, in order to keep the patient under the persistent and prolonged action of the remedy. We have not used the hydrochlorate of quinine, however, for this salt, although the most soluble and most easily absorbed, we have been unable to procure, and have employed the sulphate so much employed in hospitals. Sulphate of quinine not being destroyed in the circulating stream and being found again in the urine, we might expect a direct action on its part upon leucocytes during its passage through the blood, and consequently a happy influence upon the course of the erysipelas. These expectations have not been disappointed.

From all these facts it follows that sulphate of quinine, like all treatment, has its indications and counter-indications in erysipelas. We have tried to show some of the circumstances which interfere with its action; but we have also wished to show that it possesses other than its neurosthenic and anti-periodic properties which may be used to advantage. Is it now really its anti-diffusant action upon leucocytes which makes it so valuable in erysipelas? We are unable to affirm this at present.

We need more observations and to apply a sort of counter-proof with other substances of reputed poisonous action upon the white corpuscles of the blood; but it may be affirmed that this hypothesis is in no way improbable, that pathological anatomy and physiological experiment give it an incontestable support, and clinical observation is not unfavorable to it.

We believe, therefore, that we are able to conclude, from the preceding facts, that:

1st. Sulphate of quinine, administered in moderate and fractional doses, promptly and completely arrests the course of non-traumatic erysipelas of the face, and extinguishes it most frequently on the second or third day of its employment.

2d. The effects of this drug are less evident in erratic cases of the disease and in those which are influenced by other constitutional affections, like rheumatism.

3d. The recent investigations of microscopists upon the emigration of leucocytes suggests that it is by opposing this emigration that sulphate of quinine acts upon erysipelas.—*Boston Medical and Surgical Journal.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—ANALYSIS OF VARIOUS ARTICLES. Published in the "Medical Times and Gazette," the "British Medical Journal," and the "London Lancet," etc. (Original copies). By Prof. JAMES M. HOLLOWAY, M. D.

Stricture of the Urethra.—W. F. Teevan, F. R. C. S., Surgeon to the West London Hospital, etc., in a paper read before the Medical Society of London, urges the necessity of an early diagnosis of urethral stricture. His definition of this disease

is, "any diminution of the natural calibre of the urethra the result of the contracture of organized lymph(?)."

He urges the importance of an examination of all the patients who have been troubled with a gleet of more than six months' duration.

The site of stricture, which he considers due to atrophy (*not* hypertrophy), is most commonly sub-pubic; about, on an average, five and a half inches from the meatus externus. The other variety is usually situated two and a half to three and a half inches from the meatus externus.

Gradual dilatation, by means of flexible bougies, is preferred to the more heroic plan of forcible dilatation. Forcible and rapid dilatation is sometimes followed by death; gradual dilatation never.

The analyst can bear testimony to the practicality of the above summary as a guide to the treatment of stricture. He has been free in the employment of the sound in doubtful cases indicating derangement of the genito-urinary apparatus. And in not a few cases the steel sound or the guttapercha bougie has cleared up the obscurity. Patients will insist that they pass a full stream of urine, when, upon witnessing the act, it is discovered that the urine falls short of the mark, and drips upon the toes. This will occur when a No. 6 to No. 8 sound or bougie enters the bladder without *resistance*, but not without pain at one or more points. Such patients, when sounded, confess to a gleet of from two to six months, and also to more or less general debility and loss of sleep, which they attribute to the frequent loss of semen; spermatorrhœa.

In such cases a stricture surely exists, and speedy relief is afforded by the employment of the bougie or sound at least three times weekly. After the patient has been educated, the sound or bougie can be placed in his own hands, with directions to pass it carefully every third or fourth night before going to bed.

The advantages of a rapid and forcible dilatation are not ignored by the analyst; but the necessity thereof will, in his

opinion, diminish proportionally to the improvement in diagnosis and the early employment of gradual dilatation.

Glycerine in Croup.—The employment of glycerine by inhalation has not only proved beneficial for the relief of hoarseness, but it is regarded by Dr. Steliberger, as a valuable remedy in croup. The pure glycerine is atomized by a spray producer, and the patient is required to inhale every half hour or hour, until inflammation subsides and free expectoration occurs. Upon the return of clearness of the voice in hoarseness and in croup the inhalations may be discontinued.

Treatment of Acne Facies.—Professor Hebra employs emplastrum hydrargyri to the eruption at bedtime, to remain until morning. Upon removal the face is powdered with equal parts of bismuth and venetian talc.

Eczema of the Hands in Bakers.—In the treatment of this affection, due solely to local irritation, Prof. Hebra advises the patient to wear Mackintosh or any other impervious gloves, tied around the wrist with a handkerchief. The gloves should be removed, only at mealtimes by turning them inside out, when they and the hands are to be washed with cold water. By the use of the gloves the hands are kept constantly in a steam bath.

The writer has treated such cases successfully, by directing the baker to discontinue work for a few days, and apply a strong solution of sulphite of soda. The hands, when free from the eruption, should be protected for weeks by kid, buck or leather gloves.

Hydrate of Chloral in Trismus Nascentium.—Dr. Widenhoper, at Children's Hospital, Vienna, reports six cases of this malady, out of *ten* or twelve, who recovered under the influence of this drug. He attaches great importance to it as a therapeutic agent, because hitherto the disease has been regarded as necessarily fatal.

Before the war, trismus neonatorum prevailed as an epidemic

amongst the negroes, upon certain plantation "Quarters," in that portion of Mississippi in which the writer was engaged in practice. For two years or more, nearly every child born in those "negro Quarters" was attacked between the seventh and thirteenth day, and all died, although the treatment, in different cases, embraced the most approved remedies known to the profession. After the most careful inquiry as to general and special influences, no cause could be assigned for the prevalence of the disease upon certain plantations, when children born in the neighborhood, subject to similar climacteric, dietetic, and administerial influences, were exempt.

The duration of the disease was short—death occurring in from forty-eight to ninety-six hours—except in one case that was for a time confined in a dark, close, isolated house, away from its mother and all exciting influences.

The fact that Dr. W.'s case, displayed at his clinic, was "in danger for a fortnight," and finally recovered, shows either that it was a case of simple *tetanic spasms* or that the chloral, in from one to two-grain doses, did exert a curative influence upon genuine trismus. Dr. W. gives a double dose by the rectum, if administration by the mouth is impracticable.

Paralysis of Cranial Nerves Treated by Large Doses of Iodide of Potassium.—At a meeting of the "Clinical Society of London," Dr. Broadbent reported the history of a case of paralysis of branches of a number of the cranial nerves, which he considered due to tertiary syphiltic bone enlargement, and which yielded promptly to the influence of large doses of iodide of potassium.

The subject elicited a free discussion, participated in by Rudenell Carter, Ernest Hart, Hueke, Howard, Dr. Gull, and Dr. Buzzard.

The gentleman named last, attached great importance to the history of the case and to the result, because of the remarkable rapidity with which this form of paralysis yielded to the treatment named above. He deemed it necessary that the potash

should be continued for months after the local affection disappeared; that the absence of secondary syphilitic affections in such cases too often caused the character of the primary disease to be overlooked, and in consequence, a failure in diagnosis.

Mr. Hueke stated that the majority of these cases were due to syphilis.

The President, Dr. Gull, remarked that the skin was not always the guide; that the condition of the bones sometimes aided the diagnosis; as also, the odor of the patient and a certain grey aspect peculiar to such patients.

NOTE.—Reports of cases of trismus treated by this method, or successfully by any other method, will be thankfully received by the Editor.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—A CASE OF OBSTRUCTION OF THE BOWELS FROM IMPAIRED NERVOUS ENERGY. Read before the Elmore County Medical and Surgical Society, and recommended for publication. By L. S. GREENE, M. D., Wetumpka, Ala.

Caroline C., colored, aged sixty years, of stout frame; and previous to this time had enjoyed very good health, came to my house about the 20th of May, 1870, complaining of chilly sensations along the spine, extremities cold at the time, and had some pain and uneasiness about her stomach and bowels, with a constant desire to go to stool, without, however, being able to pass anything from the rectum at all.

I advised her to lie down, as she appeared very feeble, and having her daughter employed at the time, she took her bed in her room. Her tongue was very foul, and said she had not had

an action from her bowels in three or four days, although she felt a constant desire to do so. I gave her a purgative dose of castor oil and turpentine, and told her I would see her again that evening, which I did about eight o'clock, and found her in pretty much the same condition, with the exception that the desire to go to stool had ceased, and she did not complain of anything but a strange feeling in her bowels. I gave her at once

℞.—Calomel, grs., x.;
Dover's powder, grs., vi.;
Podophyllin, gr. ss.,

And left her for the night.

On the morning of the 21st I found her in the same condition; she complained of very little nausea; medicine had not acted; so I ordered another dose of oil, which I saw her take. When I returned at noon, she had had a scanty action, which I was not satisfied with. Her pulse was about 100, but still not feverish, as it was more of a nervous pulse; her tongue still foul; skin moist and rather cool; abdomen very little distended, and no tenderness on pressure, though she said she had slight pains at intervals in her stomach and bowels. I prescribed:

℞.—Calomel, Rhubarb, grs., aa., xx.;
Podophyllin, gr., i. M.

Make into three portions; and ordered one to be given every three hours until they acted, or she took them all.

May 22d.—Had taken all the medicine, and still no desire to go to stool; but she was resting easy, and I concluded to wait until I returned before doing anything more. At noon I found her no better; she complained of considerable pain in her bowels; pulse ninety-five and firmer; tongue still thickly furred, and general restlessness and anxiety, but no nausea. I gave her another dose of castor oil and half a teaspoonful of turpentine, and left her. In the evening I found her no better; she still had no tenderness. I ordered an enema of warm water and common salt.

May 23d.—I found that the enema had passed off, and had been repeated, without any better success; there was no fæcal matter mixed with any of them. I then gave her the following

℞.—Pulv. Rhei., pulv. Aloes, aa, grs., xviii.;
Pulv. Gambogiæ, grs., xii. M.,

And make into three portions; ordered one to be given every three hours. When I returned in the evening, she had taken and retained them all, and still no change, with the exception that she was inclined to eat something. The enema had passed off just as it had been given.

I ordered another dose of oil and turpentine, which my wife gave in person.

24th.—Complained but very little, pulse 85, tongue still foul, no tenderness on pressing on her bowels; oil had not acted. I then ordered an enema of castor oil and turpentine mixed with the yolks of three eggs, which remained about an hour, and passed off without accomplishing anything. I repeated it myself, and added to it two grains of tartarized antimony and potassa, using this time a longer tube to my syringe, which passed about six inches into the rectum, and to my surprise I met with no obstruction whatever. The injection passed off in about two hours just as it had been given, but she said she felt very comfortable, and I concluded to let her rest. On my return I found that she had slept some during the day, and was quite comfortable; still about 8 o'clock I gave her—

℞.—Rhubarb, Aloes aa., grs., x.;
Podophyllin, gr. ss. M.,

And left her for the night, with instructions that they should wake me if there was any change during the night.

May 25th.—She had rested well during the night; abdomen still hard and full, but not tender. Pulse 90; tongue foul, as before; still no desire to go to stool. I ordered an enema of turpentine, ℥ss., and yolks of four eggs, to be thrown as high up into the rectum as possible; also, cold application to the abdomen. On my return at night still no change, with the ex-

ception that she was inclined to eat something. The enema had passed off just as it had been given. I allowed her to take some warm soup, and left her for the night.

May 26th.—Still no action; pulse 85; tongue furred; abdomen as before. I gave her one drop of croton oil every three hours until she had taken five drops. At night no change. I then passed a gum elastic catheter eight inches into the rectum, and caused her daughter to blow a considerable amount of tobacco smoke into it, which did not even nauseate her, although it remained in the bowel until I left her for the night, which was about 11 o'clock.

May 27th.—I found her not changed in the least. I then gave her, as Dr. Abercrombie recommends, an infusion of tobacco every three hours until I feared to push it any further, after the fourth dose had been administered. In the evening she was still very much relaxed, and complained of considerable nausea, but did not vomit. I ordered another enema of warm gruel with no better success.

May 28th.—Pulse 90; breathing 22; still no tenderness on pressure; tongue foul, as before. Ordered an enema.

May 29th.—Still no change.

May 30th.—Pulse 100; no other change; same treatment. My intentions were now to nourish her by the rectum, as she refused to swallow anything.

June 1st.—From this time on she gradually grew worse each day; her pulse had risen to about 120, where it seemed to remain stationary; small and compressible; skin cool, but not unpleasantly so. I gave egg-nog and beef-tea injections at intervals during the day and night. She seemed hardly conscious of anything that took place around her; but still she was not delirious. When spoken to she would answer very rationally, but she was not inclined to be talkative. She continued in this condition until about the 1st of July, when she seemed to lose all her reasoning powers, and passed into a state that I shall choose to call, for want of a better name, "*trance-coma.*" I continued the enemas of the most nourishing kind. Her pulse

was not perceptible at all, and I could not detect the pulsation of her heart (by auscultation) more than once in every ten minutes, and then it was so feeble as to almost leave me in doubt. She ceased to breathe entirely, not the least sign of motion could be discovered about her chest, nor the least vapor produced on holding a polished mirror to her face. Her skin, however, did not have that cadaverous feel which is usual to those that are really dead.

Her friends came to see her, and pronounced her dead; and but for the feeble pulsation of her heart, and the peculiar condition of her skin, I should have yielded to their solicitations, and allowed them to bury her. She continued in this condition for several days before any apparent reaction came on at all.

About the 20th of the month she appeared entirely conscious again, although she was too weak to exert herself or manifest it in any other way than that of moving her lips in whispers and a corresponding increased circulation, and her extremities became warmer. I continued the injections, made pretty strong with whiskey, and about the 25th of the month she became entirely rational, her speech returned, and almost the first thing she wished was to be assisted upon the stool, and upon getting up, she had a copious discharge of fæcal matter, the first she had had in two months and three days.

From this time she gradually became stronger and better, until she had entirely recovered, without any unfavorable symptoms supervening.

This case is remarkable in several particulars. First, in the amount of mercury she had taken without the least sign of ptyalism. Second, in the length of time she remained without any nourishment, except by the rectum. She had no symptoms of any inflammation of the bowels, and no fever; no stercoraceous vomiting. Her urine was scanty all the time, but natural; and during the last month she passed scarcely any at all; but what she did pass was involuntary.

She was not in a cataleptic state, for she was relaxed and movable, and not rigid; her eyes were closed, or partially so;

and when she was set up she would fall in any direction; so also of her arms, when raised up they would fall as if lifeless. I have seen several cases of catalepsy, but none of them that resembled this; and, consequently, I feel safe in saying she was in an ecstatic or trance condition.

The length of time a person may live without having an action from the bowels is not definitely stated. Professor Wood relates several cases which had gone for weeks, and even months without having any desire to go to stool, but they all had defecation from the stomach or stercoraceous vomiting. This form of vomiting may, however, occur in spasmodic closure of the bowels, or in violent colic. Professor Bache related one or two cases in the "American Medical and Surgical Journal"; one of a young lady who had continued for a period of twenty days, and another of more than eighty days. Professor Dunglison mentions a case referred to by M. Pouteau of a lady who went eight years without having an evacuation. Professor Chapman also reports several cases of long-standing, most of these cases, however, had copious greasy sweats.

I am certain that the first cause of attack in my case was impairment of nervous energy. Professor S. H. Dickson terms it defect of sensorial energy. The lower, if not the whole, portion of the colon was empty, and I am rather inclined to think that the cæcum was the seat of obstruction, or that the defect was altogether from the want of nervous energy.

I will now attempt to make a few remarks on her psychological condition during the last month of her illness. It is unnecessary for me to relate the exaggerated accounts she gave me (after she had entirely recovered) of her visit to the other world, and what she saw and heard, for I was and am still skeptical. I knew that she was honest in her belief that such things were really so, but I attributed the illusion to a more rational cause: "The hallucination of a disordered mind." Caused, as I had learned, from a religious excitement that she had undergone during a revival held just before. And during the last month of her illness, she suffered from partial loss of

innervation, entire loss of respiration, as far as it was in my power to discover, and consequently the circulation was so much impaired that it was almost indistinguishable, except at long intervals, and what blood was sent to the brain was not sufficiently oxygenated to arouse it towards reaction, and she passed into a condition which the Germans call "apparent death," but which I shall rather call after Professor Mays—"trance-coma." Those that have read his work on "Popular Superstition" cannot help being struck with the cases he has related in his letter on vampyrism, and how he refutes the superstition which prevailed then, and attributes them to a truer cause perhaps, that of "death-trance." Can we doubt the possibility of such things occurring, after so many well-authenticated cases reported by him and many others. I think the case of "Colonel Townsend" is another well-marked example of this condition, and those who can doubt that such cases do occur, have certainly not studied sufficiently the science of psychology or of pathological anatomy.

This case of mine was certainly in the same condition, and if I had yielded to the entreaties of her friends, they would most certainly have buried her alive, and I believe that many just such cases, of which we have no knowledge, have suffered this horrible fate; and until the medical profession are more thoroughly aroused to these startling facts, it will continue to be so.

Gentlemen, it is indeed a serious thought, and I am glad to see that the profession are being aroused to its importance; that the minds of so many great and good men, both in this country and in Europe, are becoming interested in the prevention of it by seeking means to *positively distinguish with certainty the dead from the living.*

We are now making rapid strides in chemistry, physiology, surgery, and the practice of medicine, for which the world should be thankful, and although we may never discover a panacea for all diseases, "The Elixir of Life," yet we may be able to prevent the living from being buried before they are dead.

Let us, then, be more circumspect and careful, and see that this "sin is not laid at our door," and if we are not able to prevent the "death-trance," we may at least save those in that condition from a more horrible death—the death by asphyixation. You may think that I am entirely too particular about this condition; that very truly, perhaps, not one in a million are thus interred; and yet if I was the attending physician, and knew that I had consigned a single one to such a fate, I should be disposed, like the great and good, venerable and wise teacher of obstetrics, in his letter to Prof. Simpson in regard to anæsthetics, in his excuse for not using chloroform, (but which I am happy to say was groundless), nevertheless his motive was good, when he said with all his pathos and eloquence, of which every student of his knew him to be capable of, "that if I should exhibit the remedy for pain to a thousand patients in labor, merely to prevent the physiological pain, and for no other motive, and I should in consequence destroy only one of them, I should be disposed to clothe me in sackcloth, and cast ashes on my head for the remainder of my days." I am, gentlemen, of the same opinion, and like Prof. Chas. D. Meigs, for whom no one in all his numerous class had greater respect than myself, "that if I were the unfortunate one to consign a fellow-being to such a fate knowingly, I should lament it for the remainder of my days in sackcloth and ashes."

NOTE.—Jaccoud's Lectures will be resumed next month.—ED.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

TWENTY-SECOND ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION.

The twenty-second annual session of the American Medical Association convened at 12 M., May 2d, in Pacific Hall.

The officers of the Association are as follows: President, Dr. Alfred Stille, of Pennsylvania; Vice-Presidents, Dr. J. S. Weatherly, of Alabama; Dr. Henry Gibbons, of California; Dr. G. J. Heard of Texas; Dr. Samuel Willey, of Minnesota. Permanent Secretary, W. B. Atkinson, M. D., Philadelphia; Assistant Secretary, Dr. Joseph Tucker, of California; Treasurer, Dr. Casper Wistar, of Pennsylvania; Librarian, Dr. F. A. Ashford, of District of Columbia.

The Convention was called to order by Dr. A. B. Stout, who introduced Dr. Alfred Stille, of Pennsylvania, President of the Association.

Right Rev. Bishop Kip was next introduced, and opened the exercises with prayer.

Dr. Stout welcomed those from abroad in the name of the Medical Society of California.

SPIRITUALISM.

A note was read from Professor S. D. Gross, of Philadelphia, regretting that he was unable to be present, and saying that although he was absent in body, he would be present in spirit.

On motion, the note was recorded on the Minutes of the meeting.

INVITATIONS.

An invitation was read from Louis B. Lull, Secretary of the Pioneers' Association, inviting the members of the Convention to make use of the rooms of the Society whenever they thought fit.

A communication was read from the Board of Health, inviting the members to inspect the City and County Hospital, Alms-house, Industrial School, City Prison, County Jail, and other public institutions.

Dr. Stout said that all physicians who were not members of the Convention were invited and included in those invitations.

On motion the invitations were received, and a vote of thanks tendered in return.

THE ANNUAL ADDRESS.

Dr. Alfred Stille, of Philadelphia, then delivered the annual

address, which was received with loud applause. The speaker reviewed the studies which were taught in colleges, considered the claims of women, and denied their right to enter a medical college, on account of the embarrassment their presence would occasion the male student. Dr. Stille spoke nearly two hours.

On motion, the thanks of the Association were tendered to Dr. Stille, for his address, and a copy ordered to be printed.

MORE INVITATIONS.

Dr. Stout stated that the Resident Physician of the French Hospital had extended an invitation to the members to visit that institution.

The Secretary read a communication from the Academy of Sciences, inviting the Convention to inspect their museum.

Dr. Stout said he hoped that the members would bring their wives and daughters with them at the morning session; also that the hall would be open in the evening for a social conversation.

REPORTS OF COMMITTEES.

On motion, the Convention proceeded to hear the different reports, and the President called the committees as follows:*

On Vaccination—Dr. Henry A. Martin, of Massachusetts. The Secretary said that Dr. Martin had intended to be present, and bring with him a heifer, from which the members could obtain fresh vaccine matter, but business prevented him from attending.

On motion, the subject of Dr. Martin, with his heifer, was continued.

On National Medical School—Dr. Francis Gurney Smith, of Pennsylvania. Partial report read, and referred to the Committee on Publication.

On Nomenclature of Diseases—Dr. Francis Gurney Smith, of Pennsylvania. Partial report submitted and the Committee continued.

On National System of Quarantine—Dr. J. C. Tucker, of California. Passed until this morning.

* Forty-five committees had "no report."—Ed.

On what, if any, legislative means are expedient and advisable to prevent the spread of contagious diseases. Dr. H. M. Henry, of New York. Continued by request.

On Medical Education—Dr. Ely Gedding, South Carolina. Made the special order for 11 o'clock to-day.

SECOND DAY'S PROCEEDINGS.

The Association convened at 10 o'clock. A number of ladies occupied seats in the body of the Hall.

The Committee of Arrangements and Credentials submitted the following lists of delegates to the Convention and permanent members of the Association: (Names omitted).

DELEGATES.

Alabama, 1; California, 59; Colorado, 2; Connecticut, 14; Illinois, 10; Indiana, 6; Iowa, 4; Kansas, 1; Kentucky, 4; Maryland, 2; Massachusetts, 4; Michigan, 4; Missouri, 3; Minnesota, 4; Nebraska, 1; New Hampshire, 2; New Jersey, 3; New York, 13; Ohio, 15; Oregon, 4; Pennsylvania, 26; Rhode Island, 2; Vermont, 2; West Virginia, 4; Wisconsin, 2; United States Navy, 5. Total, 197. From the Pacific coast, 65; from the remainder of the United States, 132.

Virginia, North Carolina, South Carolina, Georgia, Florida, Mississippi, Louisiana, Texas, Arkansas, and Tennessee, not represented. Alabama had one delegate, and Kentucky four. Delegates from the Southern States, 5; vote of the Southern States on the Committee on Nominations, 2.

INVITED MEMBERS.

Dr. Ames, of Minnesota, moved to adopt the report, with the exception of those names reported as members by invitation.

An amendment was made and carried, that the report be accepted without adoption.

Dr. Toner wanted to know if Dr. Thomas, who represented the Philadelphia Medical Society, was on harmonius terms with the Society. He also stated that the name of Dr. E. S. Barnes, of Humboldt county, had not been called.

Dr. Gibbons, Sr., thought no member had a right to question the privilege of another to hold his seat; that belonged properly to the Committee on Ethics.

Dr. Pinkey said he came as a delegate, appointed by the Honorable Secretary of the Navy. The Chairman said Dr. Thomas had the floor, and that gentleman then stated his case was referred to the Committee on Ethics last year, and they reported in his favor.

Dr. Toner said he therefore hoped the matter would be so referred. The motion was adopted.

The Chairman stated that there was no Committee on Ethics, as none had been appointed since the opening of the session; but he would appoint the committee during the day.

Dr. Franklin hoped that some indulgence would be granted to members by invitation from California, as it was a young State, and not ready to send delegates in full form.

The Secretary read the section of the Constitution relative to the election of members by invitation.

Dr. Stout hoped that an invitation would be extended to the medical gentlemen of this coast to occupy seats in the hall: It was true that the statute was plain, but he would rely upon the elasticity of their will.

The Chairman of the Committee of Arrangements said that the matter had come before them, but it was out of their power to do anything. They were anxious to extend the courtesies of the Association, and he would, therefore, move to invite all medical men to meet with them without giving any particular title.

Dr. Davis said such a precedent might give them trouble hereafter. He would be glad to see them admitted, but as the by-laws had been carefully arranged, they could not openly place them upon the roll as members by invitation.

The motion to invite all medical men to occupy seats in the hall was then put and carried.

On motion of A. L. McArthur, of Illinois, the gentlemen nominated as permanent members were elected.

The Chairman then stated that the special order for 11 o'clock was the reading of the report on Medical Education.

Dr. B. F. Dean thought it out of order, as no final action had been taken on the report of the Committee of Arrangements.

The Chairman ruled that the reading of the report was in order.

Dr. Yandell, of Kentucky, then commenced to read the report, and was interrupted by Dr. Toner, who asked if the report was signed by a majority of the Committee.

Dr. Yandell said it was only signed by Ely Geddings, Chairman of the Committee.

Dr. Toner then held that the reading was out of order, as it was not the report of a Committee, but the opinion of one individual.

The Chair overruled the objection, and the reading of the report was commenced.

Dr. Gibbons interrupted the reading of the report, and moved that the further reading be dispensed with.

Dr. Davis asked what would be done with the report?

Dr. J. B. Johnston, of Missouri, thought the report ought not to come before the Convention, as it was only signed by one member of the committee, and therefore in violation of the Constitution.

Dr. Ayres said that he was on the committee to prepare the report, but that their views were entirely opposite in the matter, and hoped that the further reading of the report would be dispensed with.

Dr. Yandell hoped that the report would not be destroyed, but referred to the Committee on Publication.

Dr. Johnston said a number of gentlemen had been appointed to draft this report, and the Association wanted the ideas of the majority, and not the individual opinion of Dr. Geddings.

Finally, the report was referred to the Committee on Publication.

FESTIVITIES.

Dr. Gibbons notified the Association that I. Landsberger & Co., had extended an invitation to the members to visit their establishment on Jackson street.

To-morrow they were invited to the Toland Medical College to partake of a collation, and on Friday they would cross the Bay and visit Oakland and the State University. Saturday would be devoted to an excursion on the Bay, and a large steamer would take them out to the ocean, and also visit Alcatraz and other places. On Monday the cars would take the members from in front of the Grand Hotel to Woodward's Gardens, where a large number of animals could be seen. The ladies are of course included in these invitations.

A communication was read from E. B. Badlam, of the Calistoga Springs, extending an invitation to one member out of each twenty to visit Calistoga and the Geysers.

VACCINATION.

Dr. Gibbons said he held in his hand a New England homœopathic magazine, which contained an article on vaccination, and was signed by Henry M. Martin, Chairman of the Committee of the American Medical Association. Yesterday morning Dr. Martin was allowed to continue his report; and he now moved to declare the name of Dr. Martin erased from that committee, and that a new chairman be appointed. He considered it an insult to the Association.

The motion to remove Dr. Martin from the chairmanship of the Committee on Vaccination was then adopted.

A motion was made and seconded to appoint a committee to prefer charges against Dr. Martin.

Dr. Davis hoped that no such action would be taken, but that the matter would be left to the Society in Massachusetts to which he belonged. If his Association expelled him, of course his name would then drop from the roll of this Association.

Dr. Johnston said the Massachusetts Society would uphold Dr. Martin.

Dr. Stout moved that the Chairman now appoint the Committee on Ethics, and the whole matter be referred to them.

The motion was adopted, and the Chair appointed Drs. Gibbons, Davis, Smith, Parsons, and Toner.

A motion was adopted to the effect that all matters coming properly before the Committee on Medical Ethics be referred directly to them, and not read before the Association.

PRIZE ESSAYS.

Dr. Logan presented a report from the Committee on Prize Essays, who state that they had received five essays, and that they award the first prize to Dr. E. R. Taylor, of Sacramento, for his essay on the "Chemical Constitution of the Bile," bearing the motto, "Divide et impera."

The second prize was awarded to Dr. B. M. Howard, of New York (winner of the first prize last year), for his essay on "The Direct Method of Artificial Respiration for the Treatment of Persons Apparently Dead from Suffocation by Drowning, or from other Causes. Motto, "Festina lente."

The report was adopted, and the committee requested to hold all other essays at the disposition of the authors.

LEGISLATION.

Dr. N. S. Davis, on behalf of the Committee on Medical Legislation, appointed in New Orleans in 1869, submitted a lengthy report, which was received and referred to the Committee on Publication.

THE PROFESSION.

Dr. Davis, of Boston, a member of the Committee on Resolutions, appointed at the meeting of the Association in 1869, submitted an elaborate report, closing with the following resolution:

Resolved, That each State and local Medical Society be requested to provide, as a permanent part of its organization, a Board of Censors for determining the educational qualifications of such young men as propose to commence the study of medicine, and that no member of such societies be permitted to receive a student into his office until such student presents a cer-

tificate of proper preliminary education from the Census Committee appointed for the purpose, or a degree from some literary college of known good standing.

Resolved, That a more complete organization of the profession in each State is greatly needed for the purpose of affording a more efficient basis, both for educational and scientific purposes.

Resolved, That a committee of three be appointed for the purpose of continuing the correspondence with the State Medical Societies, and of asking their earnest attention to the foregoing resolutions, in addition to those submitted for their action in 1869.

Dr. J. S. Moore moved that an entrance fee of $100 to all colleges be fixed upon.

Dr. Russell spoke against the resolution, and said this would exclude the poor boy from receiving a medical education.

Dr. J. S. Moore thought it was just the reason why a certain amount should be fixed upon. The profession was overcrowded now, and when qualified men could not get respectable fees they forsake the profession. Young men of ability would not enter a profession where every one could obtain entrance by the payment of fifteen or twenty dollars. The profession should be protected.

Dr. Yandell said that his learned friend from Missouri signified his intention of bringing this matter before the Association three years ago, and he had not done so until now. (?) He had three years to collect his ideas, and there was not one presented which would hold water. (!!) The fact is, that cheap instruction had not increased the numerical strength of the profession. A certain number of students graduated every year, and that number would not and had not been increased. The brain is the aristocrat. He did not believe in aristocracy.

Dr. Weatherly, of Alabama, did not agree with the last speaker; you could not compare cheap common education to cheap professional education.

Dr. Stout, of California, believed in universal education—without price, if it were possible. He favored the idea of establishing a National Medical School, but thought the health of the medical profession should not be swayed down to the level

of the poor boy. He honored a poor young man, but did not believe in bringing down the standard of the profession to that level.

Dr. Davis said the less the Association had to do with these details the better it would be for it. He thought each college should be allowed to fix the rate, as they knew best what their course was worth.

The matter was finally laid on the table.

ADJOURNMENT.

On motion, the Association adjourned to give the representatives of the different States an opportunity to meet and appoint one delegate each as a Committee on Nominations.

THIRD DAY'S PROCEEDINGS.

The Association assembled yesterday, pursuant to adjournment. In the absence of Dr. Stille, Dr. Henry Gibbons assumed the Chair.

Professor Carr, of the State University, was introduced, and made a

PLEASANT LITTLE SPEECH.

He referred to the acceptance of the Oakland invitation by the Association, and stated that it was extended by the Mayor and the citizens.

TREASURER'S REPORT.

The Treasurer's report was read by the Secretary, from which we learn that the balance on hand is $704 32. The Treasurer reiterates the hope that the Association will not refer any matter to the Committee of Publication not of real value.

THE LIBRARIAN'S REPORT.

The report of the Librarian, F. A. Ashford, M. D., of Washington, was received and read. He reported that the books entrusted to his custody by his predecessors had been well preserved at the Smithsonian Institute, through the kindness of Prof. Henry and its Regents. Three hundred and thirty-nine volumes, including pamphlets, monographs, etc., composed the

collection at the date of the last report, and the additional matter received during the past year has been chiefly a continuation of the Medical and Surgical Journal. The report is replete with important suggestions.

Referred to the Committee of Publication.

ASSOCIATION OF SUPERINTENDENTS OF INSANE ASYLUMS.

John C. Atlee, M. D., delegate to the Association of Medical Superintendents of American Institutions for the Insane, reported that he had attended the Twenty-Fourth Annual Meeting at Hartford, Connecticut, in June last, and was cordially received, etc. The Association, formed in 1844, by thirteen Superintendents, has been steadily increasing in the number of its members, and now embraces more than sixty, representing institutions in almost every State in the Union. Reports embracing a variety of subjects relating to insanity, were read and ably discussed; and four days were profitably occupied.

The report was submitted to the Committee of Publication.

Dr. Kirwin, delegate from the Association above mentioned, to the American Medical Association, addressed the meeting at great length, urging closer relations between the Associations. His remarks came in the form of a report, and were referred to the Committee on Publication.

Dr. Storer said that at a previous meeting the question was that the Association devoted specially to the treatment of the insane, meet in closer relations with the American Medical Association; the sense of the meeting favored the "close relations." He would then offer the following resolution:

Resolved, That the Association of Superintendents of Institutions for the Treatment of the Insane and the American Medical Association should be more closely united, and that the meetings of the two Associations should be held at about the same time and at the same place. Adopted.

THE PINKNEY REPORT.

Dr. Yandell, of the Special Committee, to whom was referred the report of Dr. Pinkney on Foreign Naval Medical Affairs, submitted at the session of the Association in 1870, presented

the said report and moved its reference to the Committee on Education.

The motion prevailed.

A MERITED RECOGNITION.

The Chairman of the Section on Materia Medica and Chemistry, Dr. Yandell, reported having received a valuable paper from Dr. Gibbons, of Alameda, entitled "The Botany of the Pacific Coast." The paper was accompanied by one hundred and eighty specimens of indigenous plants, etc., and would certainly be considered a valuable contribution to the science of medicine.

The Committee moved that the paper be referred to the Committee on Publication.

Dr. Gibbons arose and requested that the recommendation of the Committee be withdrawn. The paper was not complete—not as perfect as he could make it by additional work.

On motion, a vote of thanks was passed, and the paper returned to its author for completion.

THE CANADIAN MEDICAL ASSOCIATION.

Dr. H. B. Storer, delegate from the American Medical Association, to the Canadian Medical Association, submitted a verbal report in behalf of himself and associates—Dr. Sullivan, of Boston, and Dr. Gerrish, of New York. He eulogizes the Canadian Association. Its members were far above the members of the American Association in point of medical education, almost all of them having graduated from European colleges of note.

NOMINATING COMMITTEE.

Alabama, J. S. Weatherly; California, J. M. Logan; Colorado, G. R. Bibb; Connecticut, E. K. Hunt; Washington, J. M, Toner; Illinois, A. L. McArthur; Indiana, G. W. Mears; Iowa, S. B. Thall; Kansas, D. W. Stormont; Kentucky, T. N. Wise; Maryland, J. Morris; Massachusetts, E. Cutter; Michigan, Dr. Douglas; Missouri, Dr. Golding; Minnesota, N. B. Still; Nebraska, John Black; New Hampshire, J. L. Swett;

New Jersey, W. Elmer; New York, B. F. Dawson; Ohio, R. S. Gilchrist; Oregon, Daniel Payton; Pennsylvania, F. G. Smith; Rhode Island, G. L. Collins; Vermont, Harvey Janes; West Virginia, R. H. Cummins; Wisconsin, J. K. Bartlett; U. S. Navy, Philip Lansdale.

ELECTION OF OFFICERS.

The Committee on Nominations made the following report: President, Dr. D. W. Yandell, of Kentucky; First Vice-President, Thos. M. Logan, of California; Second Vice-President, C. L. Ives, of Alabama; Third Vice-President, R. F. Michel, of Alabama; Fourth Vice-President, J. K. Bartlett, of Wisconsin; Assistant Secretary, D. Murray Cheston; Librarian, F. A. Ashford, Philadelphia; Treasurer, C. Weston, Philadelphia. Next place of meeting, Philadelphia.

On motion of Dr. Davis, the report was accepted, and the officers unanimously accepted.

THE COMMITTEE ON ETHICS

Submitted a partial report, recommending some removals, etc., and asking time in the case of Dr. Thomas, the delegate from the Female College of Philadelphia.

The report was accepted.

THE FEMALE PHYSICIAN QUESTION.

Under the head of unfinished business, an amendment to the Constitution, offered at the last meeting of the Association by Dr. H. Hutchinson, of Philadelphia, was taken up for consideration.

The proposed amendment is embodied in the following resolution:

Resolved, That the Constitution shall be so construed as not to exclude delegates from Female Colleges.*

INDEFINITELY POSTPONED.

A vote was taken, and the question indefinitely postponed.

The Convention then adjourned.

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* An analysis of the debate on this question will be published in the July Journal.

FOURTH DAY'S PROCEEDINGS.

Association convened at 9 o'clock—Dr. Stille, of Philadelphia, in the chair.

Dr. Atkinson, Permanent Secretary, read the Minutes of the previous session, which were approved.

COMMITTEE ON NOMINATIONS.

The Chairman of the Committee on Nominations submitted their final report, as follows:

Time of meeting, first Tuesday in May, 1872. The Committee have selected as

Committee of Publication.—F. G. Smith, of Pennsylvania, Chairman; W. B. Atkinson, Pennsylvania; D. Murray, Cheston, Pa.; F. A. Ashford, District Columbia; Caspar Wistar, Pennsylvania; H. F. Askew, Delaware; I. Aitkin Meigs, Pennsylvania.

Committee on Prize Essays.—Dr. A. Stille, Chairman, Philadelphia; F. G. Smith, Philadelphia; D. A. O'Donnell, Baltimore; B. F. Dawson, New York; L. P. Bush, Delaware.

Committee on Medical Education.—J. S. Weatherly, Alabama, Chairman; L. Cooper Lane, San Francisco; J. M. Toner, Washington; Samuel Willey, Minnesota; W. O. Baldwin, Alabama.

Committee of Arrangements.—E. Hartshorne, Chairman; S. W. Gross, Murray Cheston, J. F. Maury, James Tyson, S. W. Mitchell, John H. Packard, William Pepper, Richard Townsend.

OFFICERS FOR THE SECTIONS.

Library Committee at Washington.—Dr. J. M. Toner.

Vaccination.—Chairman, Dr. T. M. Wise, Kentucky.

Anatomy and Disease of the Retina.—R. F. Michel, Alabama.

J. K. BARTLETT, Secretary.

The report was received and adopted.

SECTIONS.

Dr. Lonsdale from the delegation of the United States Navy, returned thanks to the Association for the assistance rendered

to the medical profession of the navy during the past three or four years.

He then read a communication signed by the delegates representing the United States Navy, to the effect that owing to the valuable assistance rendered by the members of the Association, the rank of surgeons had been definitely fixed by law. The paper was referred to the Committee on Publication.

RESOLUTIONS.

Dr. Montgomery offered a resolution which was adopted, to the effect that a chair of ethics be established in all the colleges in the United States, so that an important part of the medical education need not be neglected.

A resolution was offered that an abstract of statistics be published, showing that out of the 60,000 practising physicians in America, less than 3,000 were homœopathists. The resolution was adopted.

A resolution was adopted that this Association co-operate with the medical fraternity of Great Britain in establishing a memorial.

A resolution was offered that the members of the Association be allowed to consult with women practitioners, providing the code of ethics be preserved.

After a lengthy debate, a motion to lay on the table was lost by a vote of 53 to 63.

An amendment was then made, "provided that they (the women) are recognized by the local organizations where they belong."

The amendment was lost by a vote of 41 to 45.

Dr. Toner's motion to lay on the table was not heard, and another motion to adjourn until 8 o'clock in the evening was carried.

THE EXCURSION.

Immediately after the adjournment the members of the Association and a number of ladies and invited guests flocked down to the ferry slip, where they arrived in time to take the 11:10 o'clock A. M. boat for Oakland.

EVENING SESSION.

A few minutes after 8 o'clock Dr. Stille, President of the Association, called the meeting to order.

The Secretary being absent, Dr. J. C. Tucker read the resolution which was offered by Dr. Atlee, at the morning session, in relation to female doctors.

Dr. Storer said that he had felt several years since that the question was of the utmost importance and interest to them. In his practice, he had found that with refined ladies they had more confidence in a man than a woman. In cases of difficult confinement there is no lady who would hesitate to send for a male physician. It was the same in all cases to which women claim a right to be called on account of their physical condition. Out of all the male physicians (and females, too) he had yet to find one who did not agree with him in his opinions. Women may carry out the directions of a physician, but they are not capable of making a diagnosis of difficult cases.

Dr. Atlee next took the floor, and contradicted several statements made by the last speaker.

Dr. Jones, of Ohio, favored the resolution. He said they were bound to consult with women by the common rules of humanity if their services were sought after.

Dr. Gibbons said if they judged the case by the arguments brought forward by Dr. Storer, it was the best proof that his side of the matter was wrong. Men changed their judgment and opinions as well as women. Physicians drank wine, and in this manner their judgment was warped.

Here the speaker was interrupted by hisses from all sides of the house.

Dr. Gibbons: We have a museum here, and if any one will catch one of those hissing animals for me I will preserve it.

The hissing here was redoubled, and the Chairman implored the members to act like gentlemen. (A creditable spectacle).

Dr. Gibbons said he was not aware of having said anything which could be considered offensive. It was a fact that men

drank wine, and were often in such a condition as not to be in a proper frame of mind to attend upon a patient.

Here cries of "It's a lie!" "It's a lie!" "Prove it, prove it!" and other exclamations again interrupted the speaker.

Dr. Stille: Gentlemen, I appeal to your judgment and good sense in this matter, and hope we will have no more of this.

One of the members said he hoped the speaker would speak to the question, and not talk about outside subjects.

Dr. Gibbons again proceeded, and said he had not intended to say anything offensive. He therefore would humbly apologize for the remark, and recall it.

Dr. Stille then called Dr. Gibbons to the chair, and took the floor amidst great applause. He said that the medical societies of Philadelphia did not prohibit their members from consulting with female practitioners. It was a particular Society (the County Medical Society) which had such a rule, and not one of *the* Societies of Philadelphia, and not one member of that Society dared to bring any accusation against physicians consulting with women. He could name gentlemen with whom they were all well acquainted who consulted with women.

Dr. Atlee: I would ask our worthy President if the College of Physicians is represented in this Association?

The Chair: It is not, sir.

Dr. Atlee: No, sir, it is not; and that College is certainly the one which should be represented here.

Dr. Weatherley said that the Association should pursue its old course, and not interfere with local questions. If the people in Philadelphia could not manage their own troubles they should not bring them before the Association. The speaker then moved to indefinitely postpone the resolution; which motion was carried amidst considerable applause.*

* As the editor is in possession of a complete report of this debate, showing (apart from the disgraceful discourtesies manifested) the general tenor of representative opinion on the question of woman as a physician, this Report will be published in full in the July "Journal." The scenes and language during this debate are very disgraceful, but the Report is interesting and worthy of record.

Dr. Storer presented a resolution to the effect that the Association views with dissatisfaction the course of gentlemen who, in setting at defiance local and State Societies, have contemplated the establishment of a precedent that, admitted in other matters, would at once destroy the authority of this Association.

The resolution was laid on the table.

THANKS.

A resolution was introduced thanking the different railroad companies for the courtesy shown to the members of the Association.

A letter was read, notifying the members that they could visit the Big Trees at the rate of $42 each, being a reduction of $11 on the fare.

On motion of Dr. Davis, the thanks of the Association were tendered to the President, Secretary, and members of the Press, for the manner in which the former had completed their duties, and for the correct reports of the latter.

On motion of Dr. Davis, the Association adjourned *sine die*.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

LOUISVILLE, Ky., May 18, 1871.

Dr. J. M. Holloway:

Dear Sir,—Herewith I send you the formula for making the injection of Perchloride of Iron and Manganese, which I prepared several times for you. Not having the chloride of manganese on hand, I took the carbonate of manganese, which I dissolved in sufficient muriatic acid.

Take fifteen grains of carbonate of manganese, rub in a mortar with one and a half fluid drachms of solution of sesqui-chloride

of iron (of the strength used for making tincture ferri-muriat) and add a sufficient quantity of muriatic acid to dissolve the manganese; then add two fluid ounces of distilled water, and filter.

The strength of the mixture can be increased by the addition of fifteen or twenty grains of carbonate of manganese.

Yours, truly, E. SCHEFFER.

This is the solution so valuable for injecting fistulas in bones.

J. M. H.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

ART. I.—SPERMATORRHŒA—ITS CAUSES, SYMPTOMS, RESULTS, AND TREATMENT. New Edition. By ROBERTS BARTHOLOW, M. D., Cincinnati. Wood & Co.: New York.

This work has passed through several editions. This issue is said to be a new edition, but it is an old one revised somewhat. The new matter is not such as would have been expected. The pathology of the disease is not sufficiently analyzed. The causes given are defective. The gravest causes—viz., urethral irritation, calculi, prostatic disease, pelvic growths, etc., are not indicated, while onanism is claimed by the author to be the paramount reason why so many suffer from this morbid condition. Such teaching is manifestly unjust, as well as inaccurate. The patient is, inferentially, charged with a vice from which he is free, and the treatment predicated on such an assumption is necessarily unscientific and inefficient. While the application of caustic, the use of various injections, etc., may possibly in rare cases be useful, in the great majority of instances they are not only not indicated, but are really injurious. It is to be hoped

that in the next edition the author will be more comprehensive, as well as accurate, when discussing the pathology, etiology, and treatment of this morbid condition.

ART. II.—WESTERN MEDICAL ADVANCE AND PROGRESS OF PHARMACY. An Illustrated Quarterly Journal. By W. H. LATHROP, M. D., Detroit, Mich.

This is a clever and useful addition to the library. It is well prepared; contains in brief space valuable matter, and would be very useful to every physician. It is a new journal; and if its future numbers are as good as is the first, it will secure success.

ART. III.—THE KANSAS CITY MEDICAL JOURNAL. (Bi-Monthly.) By A. P. LANKFORD, M. D., Kansas City, Mo.

This is another new journal. It presents a neat appearance, and is well edited. Terms, $2 per annum.

There are a certain number of physicians who seem to think (and justly perhaps) that they cannot assimilate more than one or two dollars' worth of medical knowledge every year, and who cannot reconcile it to their consciences to expend more than this stupendous amount annually for medical literature. There are several journals published for this class of readers; and of these small journals this is one of the very best. If the price is too great, those who desire to spend even less, can find on the list of American journals a few publications which can be obtained at $1 each, or say six for $5. If there be a penurious soul, so lost to all sense of what he owes his country and his country's flag as to object to this last American scheme, he is confidentially informed that he can obtain one of these journals as a premium for subscribing to another. Next to giving

a ticket gratuitously, with a dictionary as a present, to all who will travel by a certain railroad, this liberality of medical editors is unsurpassed by any on record. This new journal is really excellent, and deserves support.

NOTE.—The publication of the Proceedings of the Association compels an abbreviation of this department and many others in this issue.—ED.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—HOR.

BY THOMAS E. JENKINS, M. D.

POISONING BY STRYCHNIA IN PRESCRIPTION.

Mr. Bullock, of Philadelphia, reports a very interesting and highly instructive case of poisoning by strychnia, administered according to a physician's prescription. The strychnia was ordered in the proper dose, and the apothecary compounded the prescription accurately, according to the physician's written order. But the poisonous alkaloid was associated with a soluble iodide, and the result was the production of insoluble iodide of strychnia, which was left in the vial. The mixture was nearly all taken by the patient, at the regular intervals prescribed by the medical attendant; the last dose, however, contained the settlings of the vial, consisting principally of iodide of strychnia, the vial not having been shaken at each time of pouring out a dose. The iodide of strychnia (taken with the last dose) was dissolved by the fluids of the digestive apparatus, and death ensued.

AN AGREEABLE GUAIAC MIXTURE.

J. T. Shinn, in answer to a query, "What is the best and most eligible liquid form for the preparation and administration of guaiac resin?" says: Decidedly the most agreeable manner

of administering guaiac in liquid form, as far as tried, is that of a syrup prepared as follows:

Take of Guaiac, ℥ i.;
Solution of Potassa, f. ℥ ss.;
Sugar, ℥ xiv.;
Water, sufficient.

Macerate the guaiac in the solution of potassa, mixed with two fluid ounces of water, for two or three days; then percolate with water till eight fluid ounces of liquid are obtained, in which dissolve the sugar.

The syrup is quite pleasant to the taste, and can be taken alone or mixed with water. It has been prescribed for several years in Philadelphia, with much benefit in cases of rheumatism, and may be given for a long period without exciting disgust.—*Proc. Am. Pharm. Assoc.*

MISCELLANEOUS.

"Non omnes eadem mirantur amant que."

Rebuked by the Daily Press.—Does absence conquer love? While Dr. D. W. Yandell was absent, attending the session of the American Medical Association at San Francisco, three or four—perhaps five or six—issues of the "Courier-Journal" appeared without any puff of Dr. D. W. Yandell. Yesterday's "Courier-Journal," however, makes up for lost time, by announcing the return of "Prof. D. W. Yandell, the Great Surgeon of the Mississippi Valley," reciting his wondrous merits and the honors thrust upon him by the medical fraternity. Hereafter, we presume, that if there is another hiatus in this mellifluous current of adulation, it will be caused by one of those mysterious dispensations which so often deprive the "Courier-Journal" of editorial matter.—*Louisville Ledger.*

An Itemized Bill.—A good anecdote is told of the famous French surgeon Nelaton. Going through one of the streets of Paris one day, he came upon a crowd standing in front of a drug store. There a man lay stretched out, who had been terribly wounded by a sharp buggy shaft. His belly had been ripped, and a large part of his intestines protruded. His life could be saved only by a very difficult and dangerous operation; but Nelaton was equal to the occasion, and soon his patient, quite a wealthy man, was sent home out of danger. For three weeks Nelaton heard nothing more of him, but then he made his appearance, and asked his preserver how much he owed him. "Hundred and fifty francs," replied the surgeon. "That is much," said the man, "but give me a specified bill; here is your money." Nelaton sat down and wrote as follows: "For readjusting a yard and a half of the intestinal canal, at a hundred francs per yard, one hundred and fifty francs."—*Pharmacist.*

Glycerole of Starch.—This preparation is made by rubbing well together one part of starch in eight of glycerine; then heat the mixture gradually to 240° Fahr., constantly stirring, until a translucent jelly is formed. The glycerole of starch is a capital substitute for lard in making ointment. Moreover, this preparation of starch seldom becomes spoiled, and keeps for a very long time. As a local remedy in many acute affections of the skin, and to prevent the pitting of small-pox, it deserves a more extensive trial.—*Ex.*

MEDICAL NEWS.

"Nulla dies sine linea."

Baron Larrey has published in the *Revue des Cours Scientifiques* an elaborate essay on the peculiarities offered by the

wounds during the siege of Paris.—*New York Medical Journal.* The readers of this journal will learn with regret that the "New Orleans Medical Journal" (quarterly) has ceased to appear. Ten southern journals have disappeared since March, 1866.———At a late meeting of the Pathological Society of Dublin, Mr. Morgan exhibited a large vesical calculus of the size of a large pear, which nearly filled the bladder. *British Medical Journal.*———Mrs. Bella C. Barrows has been elected to fill a chair of medicine in General O. O. Howard's University at the same salary as that of male professors.———Frederick D. Lente, M. D., of this city, has been appointed Professor of Diseases of Women and Children in the Medical Department of the University of New York. This divides the chair hitherto occupied by Professor Charles A. Budd.—*New York Medical Journal.*———Assistant Surgeon J. J. Woodward, U. S. A., and Assistant Surgeon G. A. Otis, U. S. A., have received diplomas from the Royal Medical Society of Norway, in acknowledgement of their contributions to medical, surgical, and microscopical knowledge.——— Dr. Barnes proposes a new operation of embryotomy by means of the wire-ecraseur, which he thinks can be used with advantage in the narrowest pelvis—*New York Medical Gazette.*——— Of the 850 deceased members of the Massachusetts Medical Society whose ages are recorded, the average duration was fifty and a half years.———The distinguished clinical teacher (Professor S. Skoda) has vacated the chair of Clinical Medicine at Vienna on account of ill health.———Dr. Alexander Hosack, long known as one of America's most eminent surgeons, died at Newport, R. I., in March, at the age of sixty-six.———The Missouri State Medical Association hereafter denies representation to medical colleges charging a less tuition fee than $100 for each student.

NOTE.—On page 715 (immediately opposite), and line twenty-six, for "never received nor obtained," read never secured nor obtained.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

The Presidency of the American Medical Association.—When any one not well known to the public is elevated to a position of honor or trust, it is the custom of the Press to state such relative facts as may be important, interesting, or necessary. If the incumbent is worthy of the position, the execution of this duty becomes a pleasure; if he be unworthy, its discharge is unpleasant, but is imperatively demanded.

If any one secures his own election to a position of high honor, and is not only unworthy of it, but, from the fact of his having secured it, exercises a dangerous influence on the character and reputation of the Body of which he is a member, the Press would forfeit, very justly, all claims to respect and confidence if it failed to offer the earnest remonstrance of those whose character and welfare it is required to represent. What is true of the Press generally is especially true of the Medical Press, representing as it does that peculiar class in every community whose vitality and reputation are so absolutely dependent upon the unblemished character of those who compose it.

With these necessary prefatory remarks, it is incumbent upon this Press to make some statement at the present time in regard to the Presidency of the American Medical Association, and the present occupant of that honorable office. So far, in the history of this Association, its Presidents have had the honor conferred upon them; it has been regarded, very justly, as improper to actively seek it; the honor has always been imposed; never received nor obtained. The incumbents have, in the main, been distinguished, and all of them honorable gentlemen; their personal character has been above suspicion, and their professional record such as to secure for them the confidence and respect of all; not only of those immediately around them, but also of the great Body of the profession at large. In

the majority of instances, the reputation of these gentlemen had already been national in character, and many of them were well known to the profession in Europe. In no single instance known had they attained that high office by means unworthy of one who is worthy of such a position. In consequence of these historical facts, the Presidency of the American Medical Association has justly been considered the highest honor in the gift of the profession.

So much for the Past. What is true of the Present? In what respect do the antecedents of Dr. David W. Yandell, the present President of the American Medical Association, demonstrate his fitness for the position which he occupies? In what respect do they manifest that he is worthy of this office? In what respect has this honor been judiciously bestowed? In what respect has it been justly attained? These are undeniably the fit and usual questions to be publicly asked and publicly answered by the Press, in regard to any one who has just been elected to a position of high honor; but it is especially necessary that they should be thus asked and answered in regard to one who, comparatively unknown to the great Body of physicians, has just been elected to the highest office at the command of the medical profession.

If the record of an incumbent is commensurate with the honor of his office, his honor is increased by the examination necessary to demonstrate it; such an examination is of great benefit to him, and the Press becomes his great friend; his very best support. But woe indeed to him, with an insignificant or unworthy record, or with a record both insignificant and unworthy, who has the temerity to seek and the imprudence to occupy a position of exalted honor, if he cannot safely endure the searching ordeal to which the Press will surely and very justly subject him. To such an unfortunate individual an examination of this character (so proper, so necessary for maintaining the welfare and respectability of a profession) becomes a cause of inexpressible mortification and shame. The Press is of no benefit to him; it is his great enemy; the cause of incal-

culable though unavoidable disgrace. If any one cannot endure successfully a public examination of his antecedents and qualifications, by the Press, when he deliberately accepts high public office, he must never subject himself to this just and necessary ordeal; an ordeal which, when honestly and truthfully conducted, becomes one of the surest and the best means of protecting public Bodies from the machinations of over-ambitious and unworthy aspirants to offices of high honor and trust. Those unfortunates who cannot live under such a test should censure not those who hold the Scales and are required to use them, but themselves and those unwise friends who presented them to be weighed; who placed them in the balances. They should feel aggrieved, not by the just, unavoidable and necessary action of the keepers of the public Scales, if the weight recorded be painful and unsatisfactory, but should feel aggrieved by the course which unwise counsellors and unreliable advisers have adopted, when appealed to for advice and importuned for aid.

To be publicly weighed is a dangerous test. If it be mortifying in its results, one cannot but feel pity, or something akin to sympathy for the exposed unfortunate, while at the same time no one can comdemn the remorseless Scales for their fidelity. When one found in high office is duly weighed, and has recorded against him the terrible sentence—the sight of which palsied the Chaldean king, as he sat in the midst of his satellites, enjoying his unworthy triumphs and his discreditable successes—"thou art weighed in the balances, and found wanting," the public in this country, even with the ruinous political history of the last decade before it, cannot but feel surprised; it is so contrary to the experience of former years, when great men chiefly were honored. One feels the same old surprise of childhood, when seeing a balloon placed in the scales; he cannot easily realizethe fact, that that great inflated body before him is all gas.

When one comes deliberately before the public, after previous and suggestive defeat, and allows his baseless ambition or his

foolish temerity to subordinate his prudence and his judgment, he must expect to suffer, for he deserves to suffer. What Claudian so classically wrote in his day as a warning to such persons, is not less true to-day; "*tolluntur in altum ut lapsu graviore ruunt*;" which may be thus liberally translated: Those who will climb into high places must expect to be hurt if they fall.

By comical and ingenious climbing, aided by amused and wondering friends, who, standing under the professional tree, pushed and pricked him upwards, the present President of the American Medical Association has climbed to a high place; a lofty perch. Like many rash and foolish climbers, he has gone up too high to be supported by the body which he so well used to secure his elevation. Those who have glasses strong enough to see a very small object at a great height, behold him far aloft, swaying back and forth on the frail little body, upon which he confidingly but fatally relies for support. Some of his active aids, alarmed at the result of their mischievous work, speculate as to the best means of protecting their ambitious and renowned leader; while others, more wise, wonder how much of him will be left after such a fall. Like Claudian, they feel that this fall is inevitable, for, with Richard II., they believe that "weak men must fall, for Heaven still guards the right." This fall is at hand, and his friends had best be prepared to lift him up; to wash him with the liniment of comfort, and to rub him down with the ointment of commiseration and sympathy.

If the publication in newspapers of untenable eulogies (autographic or philographic in origin), setting forth the profound learning, the magical skill, the wonderful ability, and the pre-eminent reputation of any one as a surgeon, could deceive any but the credulous, or those uninformed of the fact, that laudations equally extravagant are, with equal justice, bestowed by the newspaper press, upon the heroes of Buchu and Stomach Bitters abominations, the reputation of Dr. David Yandell would be such, as many weak and foolish persons believe it to be; a reputation that Dominie Sampson ironically calls "prodigious;" but by well-informed physicians and the intelligent where

he is known—where the weekly and sometimes semi-weekly notices of the newspaper press are read by those who understand how such notices are often written and obtained—his reputation is duly estimated and fully understood. What is this reputation?

To prick an inflated and gorgeous balloon, and show to its enthusiastic admirers that it is after all but gas; to pluck the tail-feathers from a strutting peacock, and while exhibiting them for curious and profitable study, prove that this stupendous exhibition comes from a foolish bird, really small and easily discomfited; to seize what has appeared to be a roaring lion, and by even the gentlest disturbance of its hide demonstrate, by the long ears underneath, that this animal is only the counterfeit of nobility and courage; these are among the easy, if infrequent efforts, that duty may require one to perform. Their performance is always easy, often comical, but unquestionably necessary; for it is a duty to demonstrate, for the good of those easily imposed upon, that a great balloon is after-all easily made to collapse and become insignificant; that a peacock is not, as the Press states, "an imposing and wonderful bird," if it be properly seized and honestly examined; that a harmless and loudly braying animal is not, with those who properly understand and duly estimate him, the great lion, which in some societies he is believed to be.

These exposures are all easily made, but the duty now manifest, is more important. It is to seize one who, in the absence of most of those who know him well, (the physicians of the Southern States,) has had the temerity to foist himself upon a distant assemblage as a fit candidate for the Presidency of the American Medical Association; and who succeeded, because the physicians of the South, six excepted, were not present, and because on the Nominating Committee the South cast but two votes, when its true representation is fully twelve. This duty shall be faithfully performed as an act of justice to the respectable physicians of this country, and if the writer can use with judgment and success, the abundant and increasing material at

his command, the present President of the American Medical Association, shall appear to the public, as did the famous bird of Diogenes, "a full-grown goose plucked of his feathers."

In commencing a description of the antecedents of any one elected to a high office, it is always the custom and pleasure of the Press to narrate the great and noble deeds, in virtue of whose accomplishment, the incumbent was elevated to a post of honor. In the present instance, it is the melancholy disappointment of the Press to have looked in vain for such a record; the only evidence found being that of an opposite character. Of great or noble deeds the incumbent has accomplished nothing; while of deeds neither good nor great, he is a veritable hero. The historian, classic or ephemeral, when thus confronted, may be surprised, but he cannot forget that he is an historian. History must be faithful. The same volume which recites the Bacchanalian orgies of that regal outlaw, Heliogabalus, narrates the transcendent virtues of Augustus. The same author who records the obscene vices of that infamous libertine, the Eighth Henry, does justice to the Spartan virtues and ascetic heroism of the illustrious Cromwell. The historian must narrate history; and the following is history:

At school, the present President of the American Medical Association was chiefly remarkable for a sluggish mind, sluggishly exercised, for a bad morale and for a deficient spirit. As a medical student he was always, as the English would say, at "the tail-end of his class." At the period of graduation his standing was beneath that of the most inferior graduate; indeed, even lower than this, for he could not graduate, and was only allowed to do so, because the sympathies of his kind-hearted Faculty were imposed upon, and because of the promise, solemnly given, that the man who even thus early in life, had been "plucked," should be sent abroad, and not allowed to practice. He was therefore given the degree trustingly, and allowed to depart for Europe.

Arrived abroad, Dr. Yandell's first characteristic act was to communicate to the Press at home letters accepted as original,

while they were, for the most part, literal and unacknowledged translations from the "*Gazette des Hopitaux*, etc. Not only were these "letters" written while abroad actual translations, but letters contributed, after his arrival at home, as foreign correspondence were translated from the same sources. This "weakness" (it seems to be a family weakness) was well known by many at the time, but wonder or amusement or disgust or the obscure position and record of the offender seemed to subordinate all efforts at exposure, and the author of these letters, grown, even then, bold in the tactics of deception, had the temerity to publish them in pamphlet form as "YANDELL'S LETTERS FROM EUROPE."

After generously establishing in Paris many well-known intimacies, with Velpeau and Civiale and Trousseau and Ricord, and other equally prominent European celebrities, intimacies which Dr. Yandell, with tender modesty and great relevancy, describes in his lectures upon most subjects in surgery (and with a frequency so slight, as to render inexcusable the invariable disgust of his class) he, like Christopher Columbus or Americus Vespusius, or, say Vasco de Gama, or many other heroes who had distinguished themselves abroad, returned to his native land.

The embryo physician, by a species of incubation not anticipated by his astonished Louisville teachers, and claimed to be the effect of a Paris atmosphere, had been transformed into a great surgeon. By a method of transmutation more wonderful than that of Adrian, or Anderson, or any of those great Wizards of the North who instantly convert a very small chicken into a great and noisy rooster, the Paris teachers had converted a Doctor-by-promise (a species of animal not classified by Cuvier) into a surgeon of stupendous proportions; one long since and of course deservedly known as the "Great Surgeon of the West," as he is euphemistically termed by the domestic authors of weekly newspaper eulogies; or as some of his admirers, who prefer to speak geologically rather than geographically, have recently dubbed him, "the Great Surgeon of the Mississippi Valley." A Paris atmosphere had produced the

same effect upon Dr. Yandell's mental appreciation that it does notoriously and invariably upon that of all Americans who have inherited or acquired a functional weakness of a mental character. Everything American, in violation of all optical laws taught in Natural Philosophy, appeared to Dr. Yandell, when he returned home, preternaturally small; as though one were beholding them through a field or opera-glass reversed. Neither physicians nor philosophers have ever explained the cause of this singular and frequent trouble, affecting so many Americans who go for some time abroad; those who have made *post-mortems* of such afflicted Americans have demonstrated the cause to be due to the smallness and shallowness of the cerebral convolutions, but from a morbid fear of distressing the bereaved families of the departed, such examiners have failed to publish their great and important discovery. Many of these have communicated their discoveries to the writer, and he now, "for the first time and by special permission," publishes the invaluable result of their labors. This terrible trouble, as it was manifested in the person of the present distinguished President of the American Medical Association, not only distorted and dwarfed inanimate objects, but, to the surprise of his friends, it extended to living beings. The greatest men in medicine, if American, seemed to him positively Lilliputian in dimensions. To such a violent degree was he affected, that no one dared to mention the name of any distinguished American physician in his presence unless he was prepared to hear him depreciated, as one small in every respect; positively microscopic. With the left thumb in the left vest-pocket, with the shoulders majestically squared, and with brows corrugated like those of Jupiter when, with a toss of his ambrosial locks, he shook Olympus, the present President of the American Medical Association would, with his right arm, wave the speaker majestically away; with imposing form, classic pose of stature, and flashing eye, he would exclaim with a violence positively alarming to all who did not know him, "Tell me of Velpeau, tell me of Civiale, or of Nela-

ton, or of some one whom I can regard as great, but mention not to me old Mott, or poor Gross, or Eve, or any of those you call great American surgeons." So no one who was unwilling to witness these melo-dramatic exhibitions of froth and fustian and folly dared to allude to the great men of America. This was what is termed in that clever farce, Box and Cox, "charming, delicious." His admirers were in raptures. That grim old University Faculty, that could not anticipate all of this coming greatness, was in profound mortification, of course; they were, said the friends of the present President, like the savans of Europe who could not realize when they stood in the presence of Galileo. But as Pope, with his "Headquarters in the saddle," had his Cedar-mountain; as Hooker, with "the best army on the planet," had his Chancellorsville; and as all silly braggarts whom history has first travestied and then transfixed, had their ignoble triumphs and then their everlasting disgrace, so this melo-dramatic stigmatizer of all great men in American medicine was doomed to illustrate in his own person this one of the severest and sorest lessons in history.

Soon many who had seen such an immense spread of canvas supposed that there must be some weight at least in the vessel. Patients came to him, as they always will under similar circumstances to others; like swarming bees, they settle where the din is greatest, and where the noise is loudest. But Dr. Yandell soon found that in their anatomical configuration, the Americans (at least those in his practice) were unlike the French, among whom he had so arduously studied; and his patients in Medicine presented not the same symptoms which, in similar diseases among the French, he had so successfully investigated. Whereas a French woman, when pregnant, acts sensibly, like a pregnant woman, and deceives not her physician, an American woman, when pregnant, pretends to have dropsy of the abdomen, and when the trocar, by order, is plunged into the peritoneal sac, it enters not a dropsical abdomen, but the cavity of a full uterus and the helpless body of its unfortunate inmate. Again, scrotal abscess is easily de-

tected in a Frenchman, but in Americans, even where pus is oozing from fistulous orifices, it is difficult to do so; indeed, when an American is thus afflicted, it is necessary to require a consulting surgeon, and when the diagnosis is made by him, it is necessary (contrary to the French custom) for him to use the lancet.*

Again, where a Frenchman has subacute orchitis, it is easy to strap the inflamed organ, but when an American thus suffers, it is notorious that it is difficult to do this, and a consulting surgeon is required to indicate the proper method. Among Frenchmen erythema nodosum is a comparatively harmless trouble, but among Americans it is always the surest evidence of hereditary scrofula. These and many, very many, ethnological facts could be here recited to explain why it was that Dr. Yandell became convinced of the mortifying truth, that though a great surgeon in Paris, he could not be so in Louisville until he had faithfully studied ethnology; his anatomical accuracy and surgical efficiency were all that were necessary among the French, but Americans, as he had not then learned, differ in their configuration from all other nations.

In connection with ethnology, it is well to mention an interesting fact. When Dr. Addison discovered the pathology of the rare disease known by his name, and when the Profession were looking, with great interest, for the reports of all such cases, there being very few physicians who knew the disease, and still fewer who had studied it, there occurred one of those rare coincidences which, though common in regard to *inventions*, are exceedingly rare in the history of pathology. Addison's disease had but recently been discovered, the excitement being everywhere great, when this rare trouble appeared in Louisville, and to a most virulent extent in Dr. Yandell's practice. This was strange enough, but what followed is even more remark-

* This may seem incomprehensible, but when any one has had punctured a child in utero during an operation for imaginary abdominal dropsy, he fully understands the danger of puncturing closed sacs, and is grateful if a consulting surgeon relieves him from further mortification.

able; as soon as he had reported several cases, the disease suddenly disappeared, and has not since made its appearance. It was one of the rarest and most curious epidemics that have ever suddenly appeared and suddenly disappeared in this country; an ethnological curiosity, and a fact well worthy of record, in connection with the many ethnological peculiarities of the American people, as exclusively exemplified in Dr. Yandell's practice.

Seriously speaking, the great surgeon of the Mississippi Valley had learned that until he had at least a respectable knowledge of anatomy, practice, and surgery, it would be impossible to avoid further public mortification and professional disgrace; that it would not be graceful and effective to deride such comparatively obscure men as Mott and Gross and Eve, etc. It is a singular and historical fact, that the longer this great surgeon studied the elementary branches mentioned, the more convinced he became that the great men he had foolishly derided were great, and that he could, without a loss of dignity, allow their names to be mentioned in his presence. He commenced then to regard them as great men, and to suspect that he appeared to those who knew him as having longer ears than belong usually to members of the human family. "Poor Gross" became "my distinguished teacher," "my great master"; with many other adulatory titles which have made this kind-hearted man charitably forget the past; patronize, with a becoming smile, his former silly and crest-fallen traducer, and to help sustain his impotent pupil who had futilely villified and disgracefully abused him. Lapsing therefore, naturally and necessarily, into the position (even now barely accorded to him) of passable mediocrity, this unfortunate and discomfited pretender was practically withdrawn from active service; presenting the appearance of a Monitor after the recent war; his armor battered or stripped; his heavy guns stopped; sunk beneath the surface; ballast readjusted; and with peremptory orders to go into—"ordinary."

So he remained until the commencement of the late war. His record as a schoolboy; as a medical student; as a gradu-

ate; as a foreign correspondent; as a distinguished surgeon abroad, and as an extinguished surgeon at home has been briefly given (want of space compelling omission of those multitudinous details, which would have given increased effect to the picture.) What was his Confederate record?

It should be particularly remembered that from the commencement to the close of his connection with the Confederate army, he was never identified with regimental or brigade or hospital service; nor with the operating corps of the army. His duties were solely administrative. As an administrative officer his deportment was such as to destroy all possible confidence in his personal probity and professional efficiency; dictatorial, where this was allowed; insulting, when this could with impunity be attempted; notorious for chicanery and duplicity; false to those to whom he had assured of friendship; disreputable in the use of knowledge coming into his possession; ridiculed in his surgical pretensions; his surgical directions laughed at in his presence; his authority as a staff officer, with impunity defied; infamously treacherous in even his official correspondence; a base and notorious coward when publicly and privately denounced for his double-dealing, his insolence, and his bad faith; a card-player; cock-fighter; a trifler and idler; such is his record as a Confederate surgeon. There are proofs at the writer's command more than sufficient to convince any one, that each and all of these assertions are minutely true. Does the reader require examples?

To officially compliment, in the handsomest terms, a surgeon, a confessed friend, for his ability and acknowledged efficiency, and yet, on the same day, to have a relative appointed to the friend's position; and when compelled to read the two similarly dated official papers in the presence of witnesses, and then denounced in language that no one but a poltroon could tamely hear, to act only as does the poor fish drawn from its dark and devious ways into the light of day, gasp and whiten at the gills. Is this a fair example?

To approve an order for the removal of surgical dressings,

foolishly terming them unsurgical, and to be not only ridiculed for surgical ignorance, but defied as a staff-officer. Will this be regarded as a fair example?

To be charged with dishonestly and basely writing or causing to be written infamous letters to destroy official confidence in a surgeon of high position and unblemished character; and when denounced for this, to receive it all and submit to it all. Is this a corroborative example? If not, there are many other facts which must do service when necessary.

Discreditably detached from the Cis-Mississippi Department and sent across the river, to be again officially relieved of prominent service, and made an attache at Headquarters until the war terminated, this closes his inglorious career; a career devoid of honor or even respectability, and with less of operative experience connected with it than is to be found in the record of the Assistant Surgeon of a marching regiment. Such is the Confederate record of Dr. Yandell.

Yet knowing all this, he returns to Louisville, and either writes, or causes to be written, or sanctions the writing of statements making him a very Larrey in the Confederate army. These statements, at great length and short intervals, appeared in the daily papers of Louisville, and have continued to appear, at very short intervals ever since. Here is a sample quotation: "The representative surgeon of the West;" "one whose dictum was the law in Confederate surgery;" and other statements equally dishonest and basely fraudulent. As this fraud was commenced at the close of the war, so it has been continued (to the disgust of every honorable physician and intelligent citizen) to the present day. Creating a fraudulent reputation, and deceiving the uninformed, the unsuspicious and the unwary.

A few sentences upon this subject are especially necessary. Where a physician pretending to claim a distinction between himself and the brazen charlatans of the country, resorts to the same means (the newspapers) for attracting public attention and for creating a fraudulent and profitable prominence in a community, it is but what he deserves, when he is fairly, though

generously lashed by the medical Press; a Press which would be dishonored as the organ, in part, of an outraged profession, if it could remain a silent witness of such shameless and disgraceful enormities.

When the really distinguished physicians of this City and State—those who are justly honored for a life of personal probity and professional excellence—live year after year without their names being once seen in the newspapers, it would require even more than the credulity of unsuspicious childhood or the dotage of helpless senility to believe that the name of a relatively very inferior man should, without dishonorable methods, be ceaselessly thrust upon the attention of the public. To believe that such a result is not the offspring of contemptible trickery and dishonorable manipulation, is to argue that one is unable to recognize dishonesty, or fraud, when these are ceaselessly thrust upon one's attention. If a physician cannot abandon such a contemptible vice until he is lashed out of it, the Medical Press has an unpleasant but necessary duty to perform. A duty that will be performed.

Since the war, Dr. Yandell's career in this city has been a blended history of presumption, pretension, discreditable blundering, and undeniable Charlatanism. Are a few examples required? What is to be said when one, after an exhaustive lecture upon a fatty tumor, attempts to enucleate it, and by a blundering prick of the knife opens the sac of an abscess, and has the pus discharged over his person? What is to be said when one consumes hours in blundering efforts to reach the bladder in the operation for lithotomy? When a sound testicle is crippled by the trocar in a case blunderingly treated? When, after a lecture upon buboes, the bistoury is plunged dramatically into a tumor of the groin, and, because a gross error has been committed, the class is told that the pus is too thick to run? What disposition can be made of the numerous and foolish blunders of this surgeon, now so notorious in this city?

This paper must unavoidably be concise and comprehensive in character, so that the enumeration of such details is necessarily

impracticable. Were it not for this, many disagreeable questions, with their more disagreeable answers, could be furnished; such as how Dr. Yandell was elected to a Vice-Presidency of the American Medical Association in 1867; why empirical preparations are prescribed; how testimony in regard to facts said to be witnessed could be truthfully given, when the testifier was not present to witness them; what has become of the very many cases of molluscum that he has seen, etc., etc. These and many other interrogatories eloquent in the suggestion of deficient morale and unworthy character could be not only asked, but answered, if the tenor of such a paper could admit of the use of such material. It is, however, chiefly that portion of personal morale necessarily manifest in one's observance or disregard of the medical code of ethics that this section of this paper has chiefly to represent. The exhibition of it must be brief, though the lessons inculcated and the reflections induced are most grave and important. Dr. Yandell, both privately and publicly, repudiates the code of ethics; he ridicules it on all occasions; he travesties it in every possible manner; he infringes it (demonstrably) when it is profitable to do so; his record in official bodies shows that he casts contumely and scorn upon it. This code forms the very basis of the laws which he has undertaken to administer and to defend! What a spectacle! The open and confessed repudiater of the laws undertaking to administer and protect them! A spectacle only equalled in its absurdity and monstrousness by the sight of an indicted breaker of the laws, one known, proved, and acknowledged to be a breaker of the laws, sitting in Court as a Judge and protector of these laws. It is excusable in those who, ignorant of such facts, have elected such a protector for their laws, but what can be said of one who, boasting of his repudiation of law, has the temerity, the brazen hardihood to thus stain the Judicial Chair? How each one reading of this enormity must exclaim, with Shylock, "a Daniel come to judgment; yea, a Daniel; oh, wise Judge, how I do honor thee!"

Is this chair to be so stained? Are the reputable physicians

of this country, in their highest counsel, to be so dishonored?

Such is the record; at least here are pages of biography sufficient to show the tenor of the life, to demonstrate the character of the present President of the American Medical Association. They show what the methods herein described, can accomplish; that they can secure a wide-spread notoriety; a pecuniarily profitable return; an apparent success; the highest office in the gift of a learned and distinguished profession. The means and methods, which can accomplish such results are, indeed, tempting; they are manifestly and dangerously seductive to the weak, the irresolute, and the depraved. They would be irresistible to many—to that great host who are the apostates of right, and the politic disciples of profitable wrong—if there were not another chapter to this dangerous history; if the record were allowed to terminate where triumph has been gained, and the coveted goal has been won. But it cannot be so. Such a record does not end here. There is, as a part of it, an hour of retribution; and this is now at hand. It will come with a crushing force; an irresistible destruction. The penalty has been long deferred, but is at last to be fully meted out. So long as one is content to remain in obscurity, while resorting to unworthy means to achieve success, there may be a result which the superficial call success; but when such a workman comes forth, from the secure paths of private life, into the high walks of public station, where only the really distinguished and the truly great can safely stand, he must expect to have his entrance challenged and his credentials minutely investigated; if he have an indisputable right to be there, he will have achieved a great success, a glorious victory; but if his passports be defective or fraudulent, he will surely be ignominiously, though justly ejected. The highest earthly station is purchased at a fatal price, when it is obtained at the expense of character and reputation. There is a grand logic in life, for sound principles are the only premises which can secure a perfect and impregnable conclusion. All others lead only to disaster and disgrace.

Every proper and legitimate effort was made by the writer to prevent the election of the present President of the Association, by sending to gentlemen, in attendance at the meeting, letters embodying facts sufficient to accomplish the purpose intended. These letters he authorized those to whom they were sent to read in the Nominating Committee Room, and if this were not sufficient, in the Convention Hall. It was believed to be impossible that gentlemen would elect any one as the protector, representative, and custodian of their laws, who publicly and confessedly repudiates those laws. It is not known whether these letters were read. The fact of their being sent is mentioned; first, to show that there was every desire to avoid this painful and public exposure, now necessary; and second, because it is deemed best to state what there has been no disposition to conceal, and which if not stated now, may be mentioned by others, for the purpose of suggesting that persecution of a private physician, and not the discharge of a painful but necessary duty to the Profession, has been the object of the writer.

It is a most unpleasant necessity, a most unwelcome duty to have been compelled to write this article; but in justice to the character and even safety of the respectable portion of American Physicians, and in the discharge of obligations resting upon the Press—obligations to declare the truth, to advocate the right, and to denounce the wrong—it is absolutely impossible to have done otherwise. Indeed, any Press in possession of a tithe of these facts, would justly forfeit not only the confidence, but even the respect of all true men, if it failed to say anything less; if by that facile silence, so tempting and so often unjustly controlling the Press, it apparently sustained, or even constructively justified, this recent election in San Francisco. This Journal could not adopt such a course.

The writer, in the ignorance of the General Public, in regard to facts in his possession, has everything to gain and nothing to lose by a silence, which odious craftiness (conventionally termed policy and tact) would dictate; by a silence which several of his best friends think essential

to his possible escape of injury and probable misconstruction. In his independent, if erroneous, judgment however, this course would be improper. It would be unjust to the great body of the Profession at large, for a Press, thoroughly informed as to facts notorious in the community and country in which this Press is situated, to be silent at such a time.

From the period at which this Journal was first published, up to the current month, it has endeavored to advocate, however inefficiently, what was believed to be the truth and the right; what was believed to be best for the welfare and character of the Medical Profession; and it has equally striven to demonstrate, however feebly, what was injurious or disreputable. It cannot consistently or properly, swerve from such a course now. Many will honestly and many, purposely, misconstrue the motives, which compel the statements in this article. To be misconstrued by the honest and the true, is undeniably, a most painful ordeal; indeed, the esteem and respect of those really noble, is the highest temporal reward of all who strive for the right, but they would be unworthy of receiving this priceless reward, if the fear of losing it, could cause them to deviate from a course which they believe to be necessary and just.

The foolish and the partizan; sycophants and satellites; trimmers and please-alls, will call this article an "attack;" yet if they do this, if they be so unwise, they will, by the use of such language, be infinitely more severe, than the writer can have been, for one's life must have been indescribably disreputable, if a review of it can be justly termed an attack.

To those who honestly question the propriety of the public statements made in this article, or who honestly misconstrue the motives which caused these statements to be thus made, it is proper to say that the chief facts which induced them, have been known to the writer for several years; they were never mentioned, however, because they were applicable only to Dr. D. W. Yandell, and it was therefore, not necessary to notice them; but now they refer to the personal, professional, and official character of the Presi-

dent of the American Medical Association. They once referred to a private citizen; now they refer to a public officer. What disposition the Public may make of the motives for the statement of these facts is, perhaps, immaterial; it cannot, however, dispose of the facts. They are facts; they cannot be evaded; and they shall not be ignored or repudiated.

Is there any physician, having the commonest respect for the honor or even decency of his profession, who can deny, when such facts are applicable to any one elected to such an office, that the Press would be criminally unfaithful, if it did not protest against such an election; did not properly enlighten those making such an election, and publicly expose the individual elected? The Press would indeed be justly derided, even despised, if any one with such a record should escape proper punishment, when he has the temerity to seek, and the impudence to occupy the high and prominent position of PRESIDENCY OF THE AMERICAN MEDICAL ASSOCIATION.

NOTE.—Much space has been given to this article, but the readers, with the writer, will not regret this, if it can accomplish the great objects intended. First, the protection of the profession from being again depreciated in public estimation by the election of one unworthy to occupy the highest office in its gift. Second, to secure a higher standard of personal probity and professional excellence among prominent medical officers, by showing that all aspirants who are deficient in these respects will be fully criticised and fairly exposed. If this were always done, unworthy medical men would be afraid to seek high station, and a noble profession would be ennobled in its representative men. Physicians would look to the future of their profession with pride; with confidence and hope. As it is to-day, with most of the great men uncommissioned, and with so many small men at the front, the true soldiers in the medical field are discouraged; many of the bravest and best are in despair, and look only for degradation and defeat. The Profession needs its great men in its high offices; and it must have them; if others come to the bar of public opinion, they must be distinctly warned that they will be certainly tried, and PUBLICLY SENTENCED.

BREVITIES.

So far, the Exchanges have suggestively kept silent, in regard to the recent selection made for the Presidency of the As-

sociation. Some have never heard of the person selected, and some who have heard of him do not wish to say what they have heard.———In the May "Journal," Dr. Barker's article on Thrombus should have been credited to the "Obstetrical Journal," New York.———In the article on Physiological Peculiarities in the same number, the name of Marat was printed Murat.——— Again, the word pounds is printed quarts in the foot-note alluding to the whole weight of blood in the adult. Hoffman's estimate is one-fifth of the whole weight; Lehmann's is one-eighth; this is more nearly correct.———An exchange states that where a medical student attends one course of the University of Pennsylvania, and then attends one summer course of the University, he will have conferred upon him the degree of Doctor of Philosophy. This makes a man a philosopher before he can be made a physician, whereas facts teach that many of the best physicians are not sufficiently educated to be accepted as philosophers. What an insult to the memories of the great departed to term a young fledgeling, whose knowledge is so meagre that he cannot even graduate in medicine, a Doctor of Philosophy! If young men do not wish to make themselves ridiculous, they had best severely eschew such a title.——— "The Medical and Surgical Reporter," Philadelphia, announces that the Association elected Dr. D. W. Yondall, Jr., President. Here is a wise election; the present incumbent is not known, even by name, in Philadelphia, a great medical centre, and by a journalist familiar with the names of the prominent physicians of America.———Attention has been called to a paragraph in the "Pacific Journal," edited by Dr. Henry Gibbons. This San Francisco editor alludes to the fact of the "Richmond and Louisville Medical Journal not having appeared in October last, as an "eclipse." Sympathy for one having suffered an illness of two months finds expression in the use of this generous language, and in charging the writer with having used a dozen or more articles from the "Pacific Journal," without credit. These "articles" were chiefly extracted by the "Pacific Journal" from foreign sources, without credit; they averaged a

few lines each in length; small items of news, etc., for whose issue the "Pacific Journal" deserves not the least credit. Calling items of a few lines "articles" is natural in a Journal of such size. Indeed, one or two actual articles would make the "Pacific Journal" appear as turgid, as was its editor *before* his recent speech in California, in which he charged wholesale drunkenness upon the profession; and the absence of real articles, renders his Journal as limp and small, as he appeared *after* that speech, during which he was hissed for his libel, and made to apologize. Just a year ago, the publishers of the "Pacific Journal" (Messrs. Roman & Co.) held possession of the accounts and mailing-book of the "Pacific Journal," and would neither continue the issue of the Journal, nor surrender the books; the reason will not be given. Dr. Gibbons sent long and piteous articles to the Journals, appealing to them for help and a little comfort. The writer had a kindly feeling for him in his troubles; he wiped his weeping eyes, and helped him in his grief. This is the return. When the farmer, in Æsop's Fables, found a poor snake frozen and nearly dead, he warmed and nursed it. The reptile turned and used its sting. Æsop adds a moral to his narrative. To this one, a moral is unnecessary; each reader sees it, too plainly. Indeed, it is impossible to associate the word *moral* with the name of one, who claims that the physicians of this country are all drunk once a day, and though the hissing of the Association has already sorely punished him for this libel, one must add that, where Dr. Gibbons charges an ephemeral drunkenness upon all physicians, he must feel that he has given the proper solution to the problem involved in all the nonsense which he writes. Hereafter, all that is objectionable in his writings or deportment, will be justly attributed to the admitted cause.——— The excellent article on Diabetes in the May issue, was from the "New York Medical Record.———A few reflections on the last meeting of the American Medical Association, will be offered next month. Every physician, who will reflect carefully, must see that the proceedings of the Association affect for weal

or woe the present and future of medicine in this country. The plain question, addressed to the common sense of every one in this connection, is this: Can a Body of this kind (even if composed of the best physicians of this country,) in three or four days, receive, read, and refer the grand aggregate of scientific papers offered, and in addition calmly, wisely, and successfully analyze and dispose of the great questions, upon whose efficient disposition depends the progress and glory, or the degradation and failure of American Medicine? The very statement of this question, suggests the absurdity of such an effort; and yet, upon the result of this effort, the physicians of America have been docilely relying for twenty-five years to have their profession made pre-eminent, prosperous, and progressive! What is the proper remedy?———The time has evidently arrived, when it is necessary to organize a Medical Body, which shall have supreme cognizance and disposition of the great questions, upon whose efficient disposition depends the successful future of American Medicine. It is not proper to disturb the American Medical Association. It has its own functions, and these can be discharged profitably and successfully, if it be disencumbered of the many issues, which, met as they have been, serve only to distract its attention, disturb its counsels, and destroy its character and respectability. All feel that this Body has utterly failed, and must necessarily fail to settle these questions. How shall this High Body be organized? What say the experienced and wise men of this country, who are really and deeply interested in the character and progress of medicine; and who do not regard it as a trade, or as a fortunate medium for obtaining unworthy notoriety? It is to be hoped that all such gentlemen will seriously reflect upon this important matter, and send the result of their reflections to some of the Journals of this country.

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